F-16 FIGHTING FALCON PROGRAM OVERVIEW

F-16 FIGHTING FALCON

PROGRAM OVERVIEW

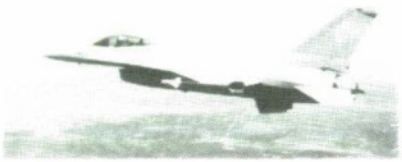
Contents Page

Program Status

AMC2532

PRODUCING THE MULTIROLE F-16 FOR NINETEEN AIR FORCES

United States Air Force

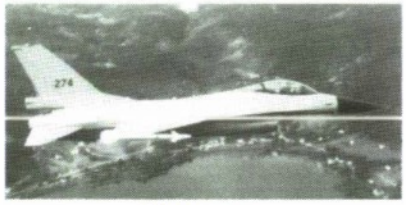


United States Navy

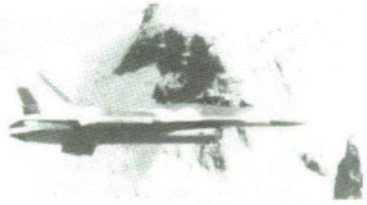
Belgium

Denmark

The Netherlands

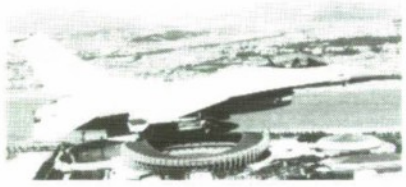


Norway



Israel

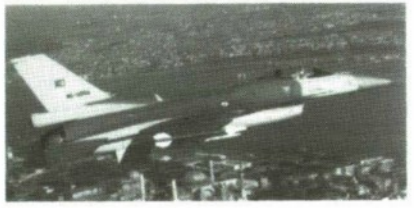
Egypt



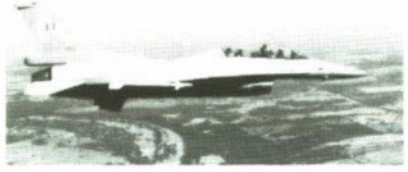
Korea

Pakistan

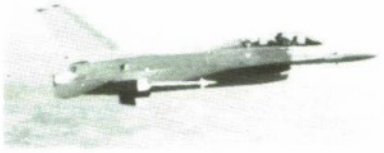
Venezuela



Turkey



Greece



Singapore

Thailand

Indonesia

Bahrain

Portugal

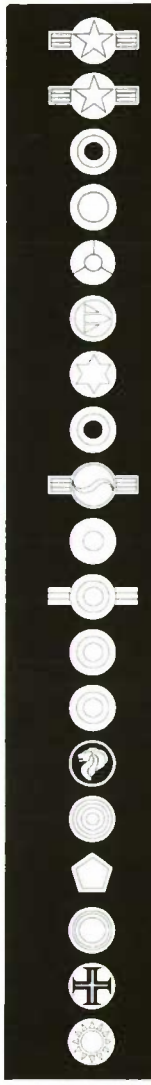
Taiwan

AMC2804D

20 November 1992

F-16 Program Status

Through March 1993

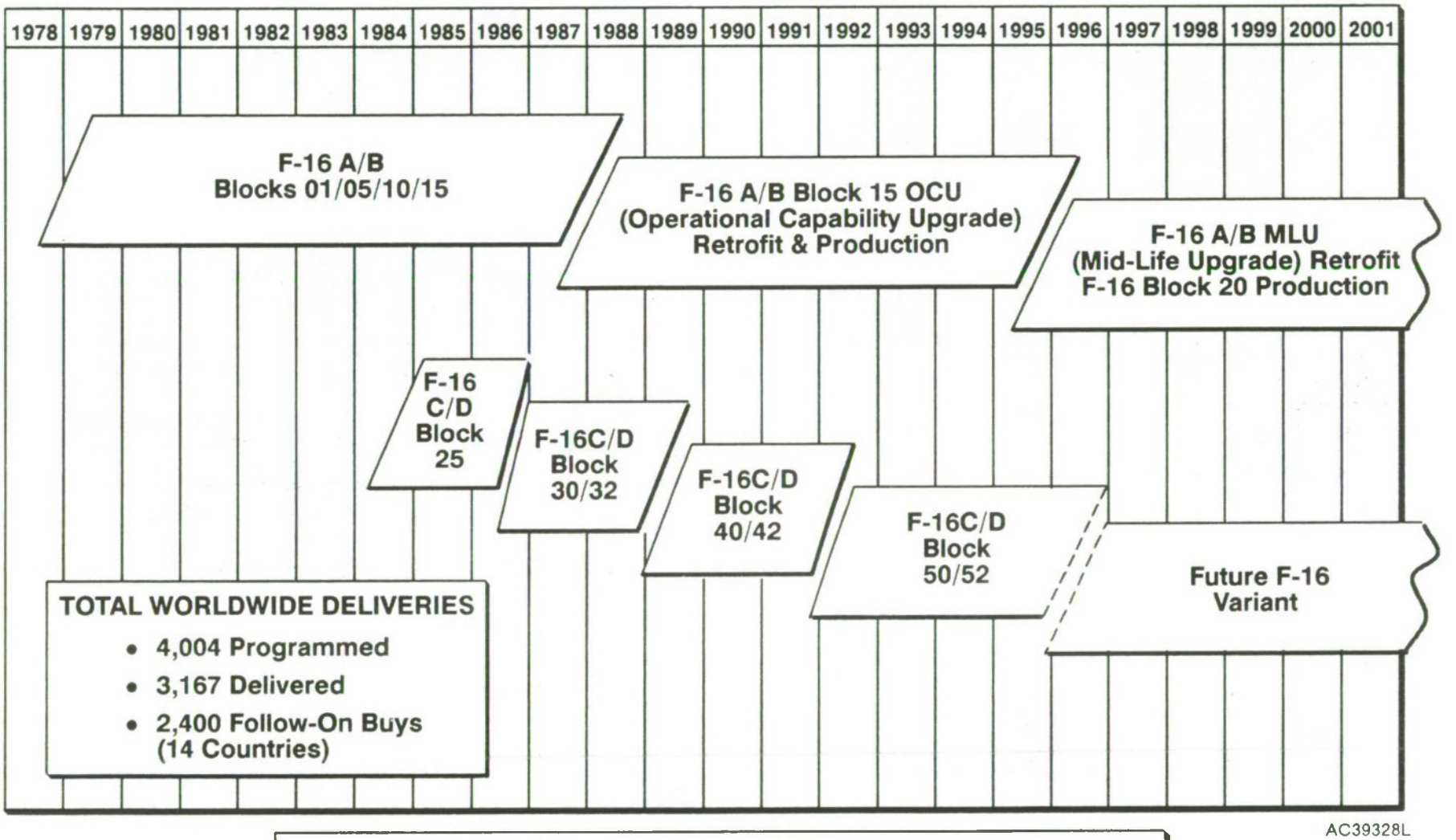


- U.S. Air Force
- U.S. Navy
- Belgium
- Denmark
- The Netherlands
- Norway
- Israel
- Egypt
- Korea
- Pakistan
- Venezuela
- Turkey
- Greece
- Singapore
- Thailand
- Indonesia
- Bahrain
- Portugal
- Taiwan

- **3,167 F-16 Aircraft Delivered**
  - 1,529 F-16A/B
  - 1,638 F-16C/D
- **4,004 Total Aircraft Ordered**

AMC9214J

F-16 Production Schedule



AC39328L

USAF AND INTERNATIONAL CUSTOMERS REMAIN COMMITTED TO THE F-16

1 April 1993

F-16 Capability Evolution

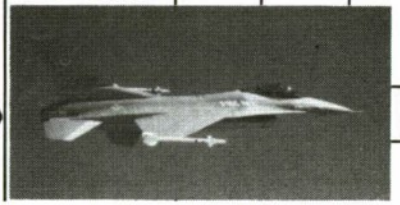
PRODUCTION PROGRAMS

F-16A

- High Combat Effectiveness
- Low Acquisition/ Support Cost
- High Readiness/ Maintainability
- Multinational Production

MSIP II

F-16C



- Upgraded Cockpit & Avionics
- All-Environment BVR Missile
- Night/Under Weather Attack

MSIP III

F-16C Production

- Advanced Sensors & Weapons for Multirole Missions

Advanced F-16C Options

- Alternate Engines
- Radar Enhancements
- Digital Flight Controls
- Upgraded Structure and Systems

Advanced F-16A+ Options

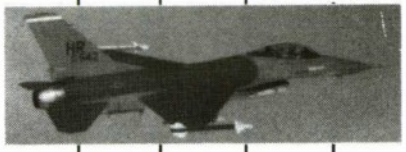
- Advanced Avionics & Weapons
- Enhanced Cockpit Displays
- Increased Thrust

CONTINUED F-16A PRODUCTION

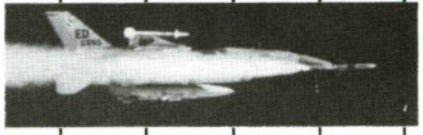
RETROFIT PROGRAMS

- Expanded Avionics
- Provisions for Advanced Weapons
- Multinational Program

OCU



ADF-16



- Missionized Retrofit
- BVR Missiles
- Small Target Detection

F-16R

F/A-16

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999

AMC2534A

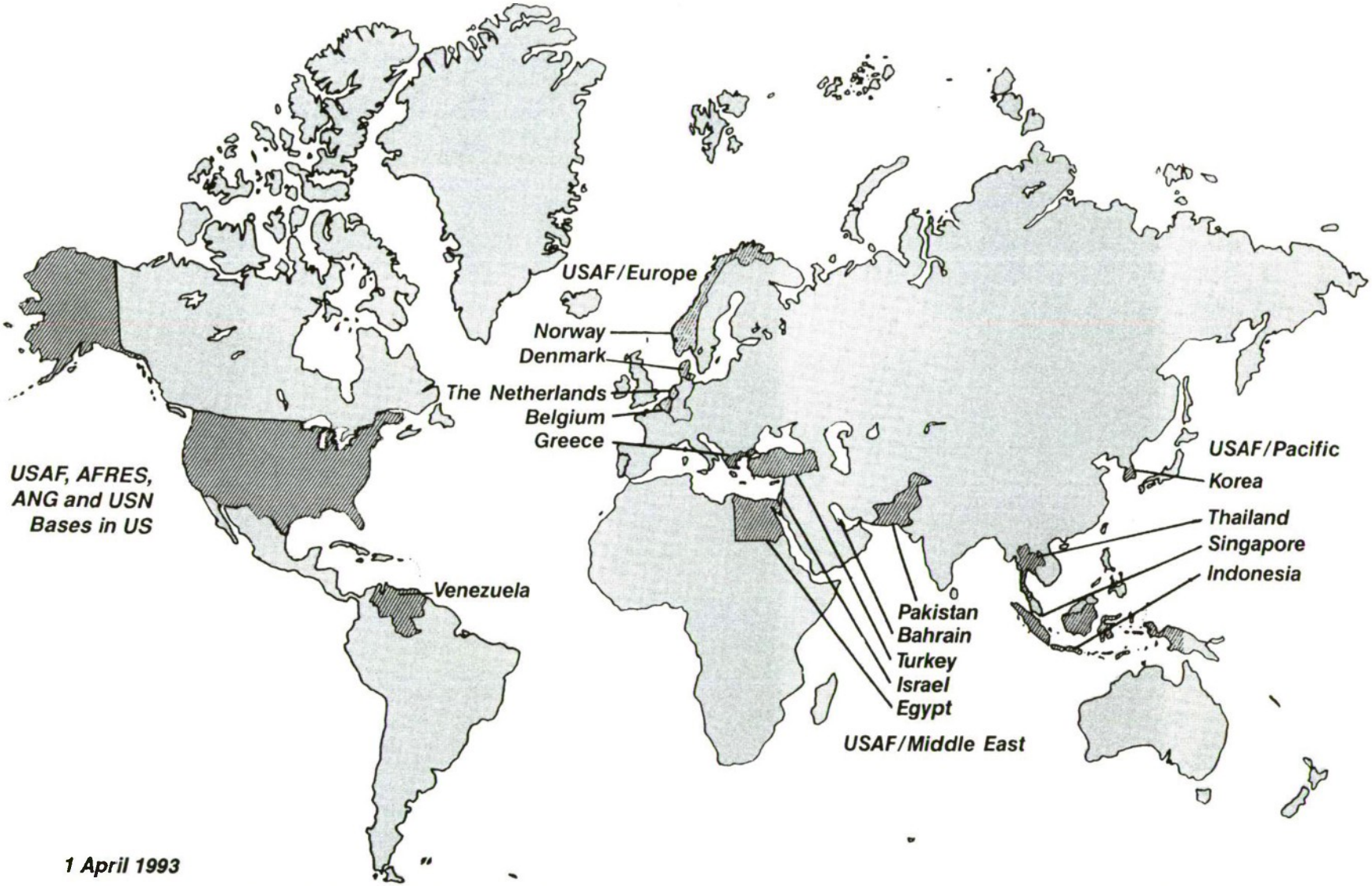
Unexcelled Production Record

12 November 1992

- **Over 3,100 Aircraft Delivered to Air Forces of Sixteen Countries**
- **Third Multiyear Procurement Authorized for FY 90-93**
- **Multinational Coproduction**
  - **Thirteen Countries**
  - **Four Assembly Lines**

AMC484D

F-16s Operational Worldwide



Seventeen Air Forces Operating from More Than 90 Bases

AMC2517E

F-16 Delivery Status

LOCKHEED – *Fort Worth Company*

	Scheduled/Delivered	
	2539/2540	222/222

SABCA – *Belgium*

FOKKER – *The Netherlands*

	300/300	105/105

TAI – *Turkey*

1 April 1993

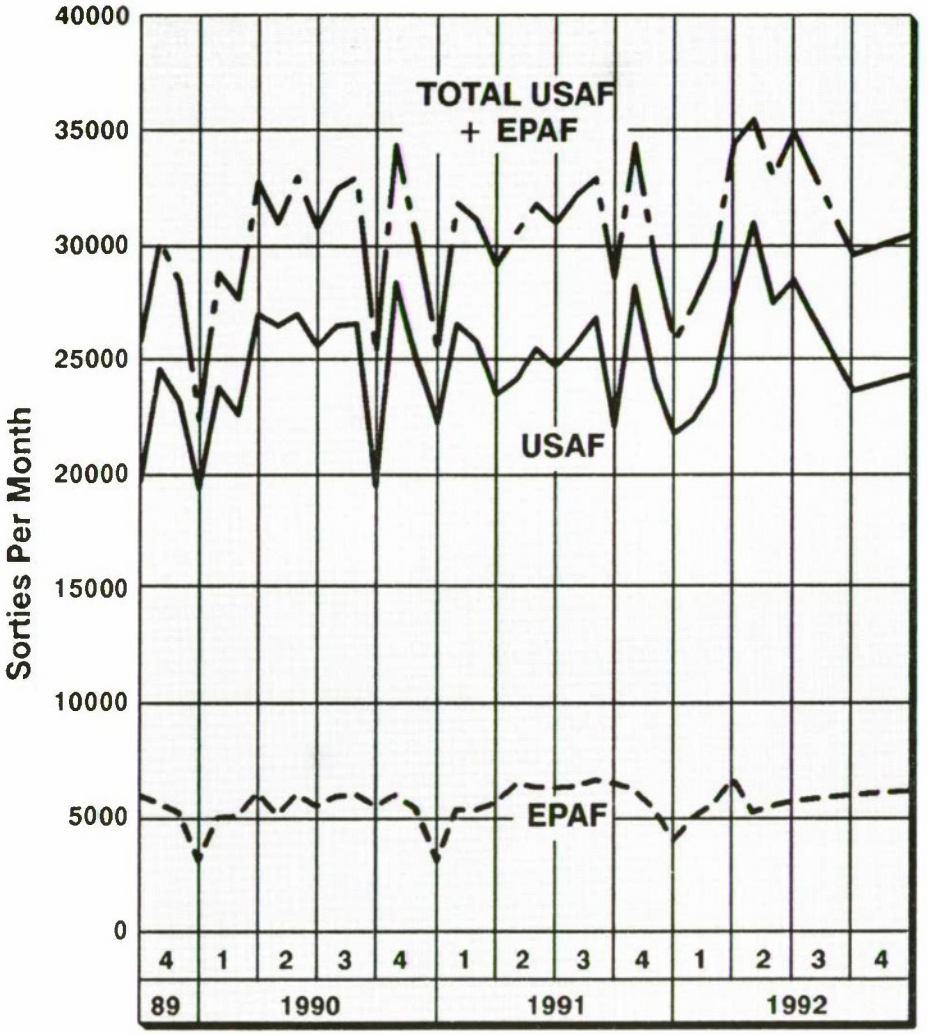
AMC451Y

F-16 Flight Program

UNITED STATES AIR FORCE

EUROPEAN AIR FORCES

F-16 Worldwide Fleet Has Accumulated Over 4,725,000 Flight Hours



TOTALS THROUGH DECEMBER 1992

	Sorties	*Flt. Hours*
USAF		
Active	1,857,590	2,722,461
Guard + Reserve	489,189	656,399
Total USAF	2,436,779	3,378,860
EPAF	612,513	679,696
TOTAL	3,049,292	4,058,556

1 April 1993

ACA1206H

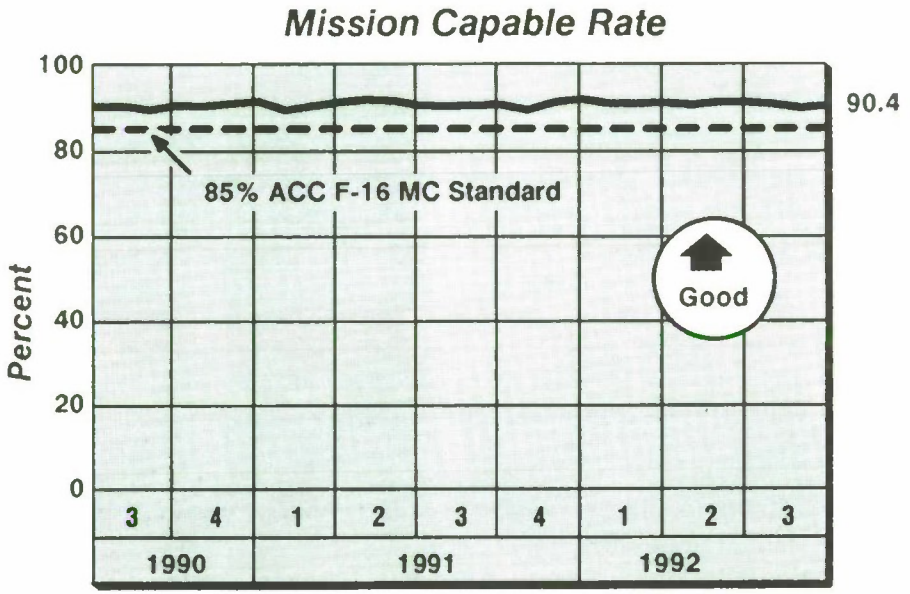
USAF F-16 Fleet Setting Readiness Records

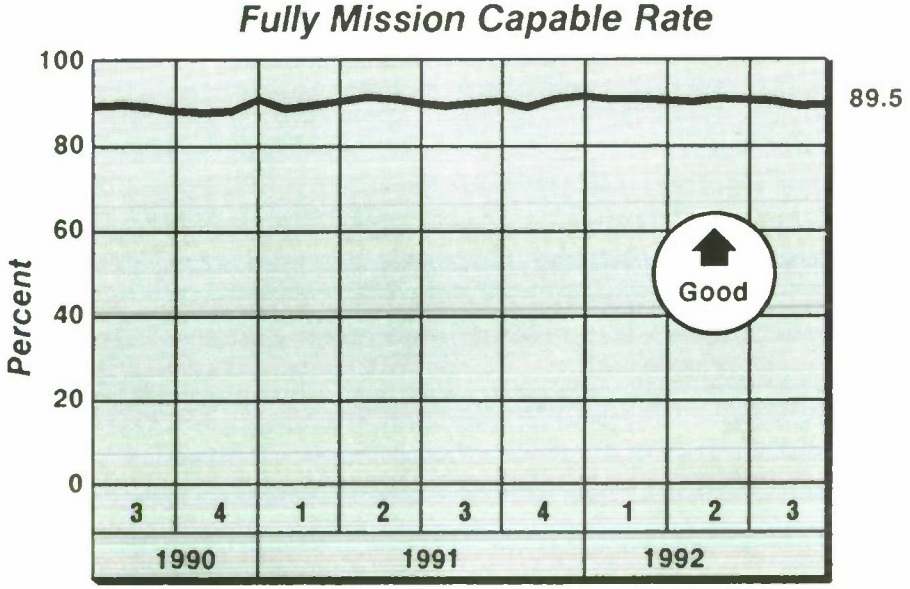
Typical Desert Storm Comment

"I Just Completed My 100th Combat-Hour in Less Than a Month. In the Last 27 Days, I Flew 28 Missions Without a Single Ground or Air Abort, or Even Late Takeoff!"

Lt Col William Diehl, 174th TFS Commander

1 April 1993





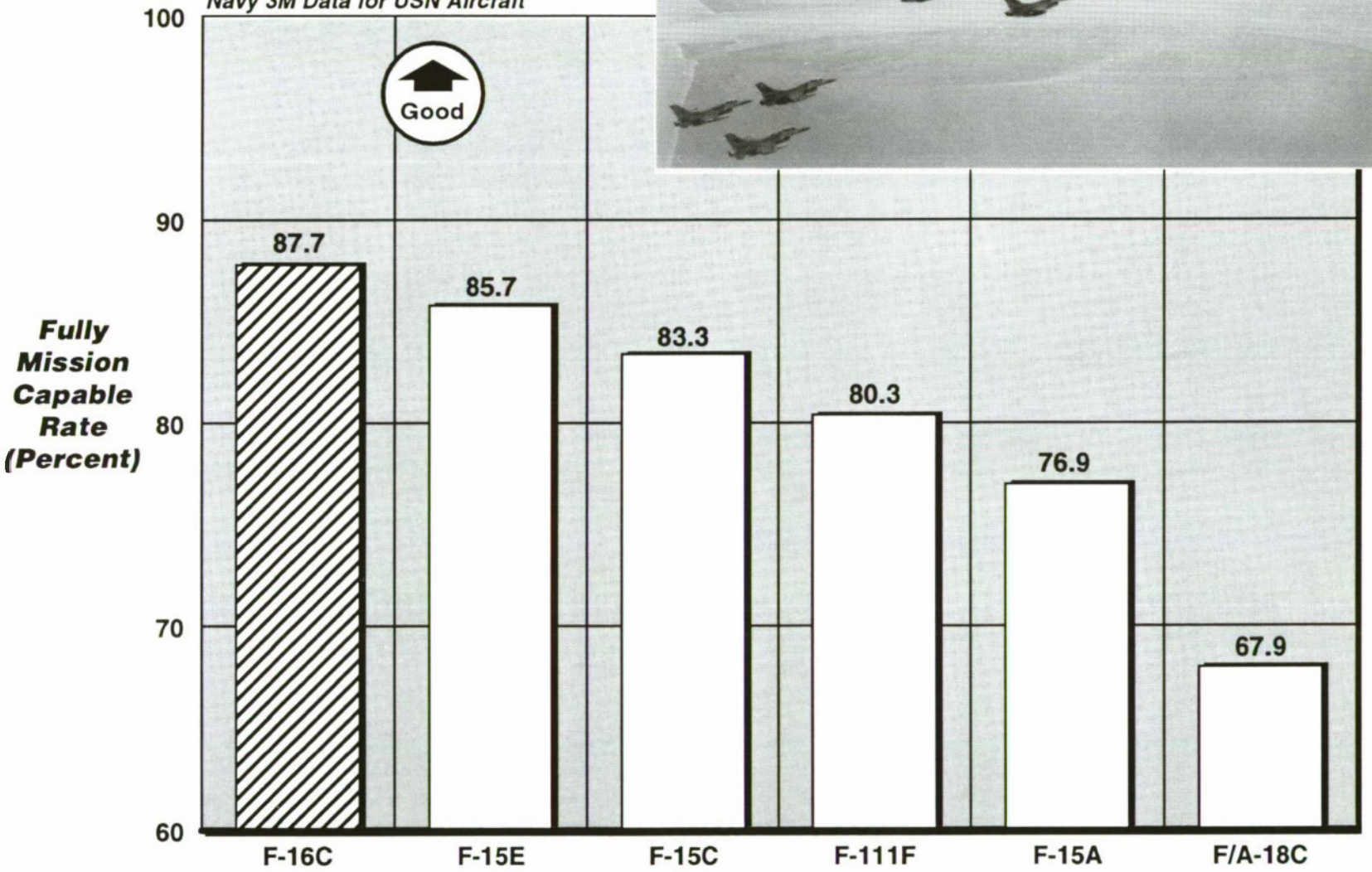
(ANG/AFRES Not Included)
Source: MS & TICARRS Data

ACA1209H

Operational Readiness Comparisons

October 1991 - September 1992

AFR 66-1 Data for USAF Aircraft
Navy 3M Data for USN Aircraft



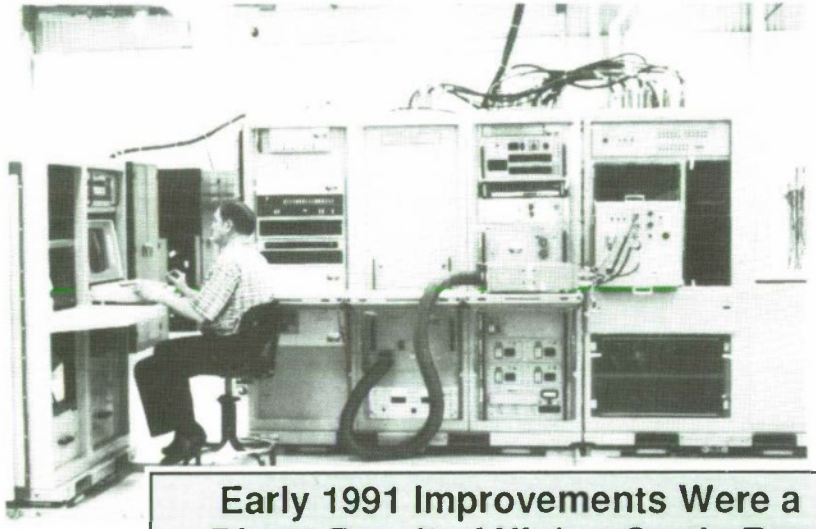
NOTE: By December,1991, No F-16A/B Aircraft Were Possessed by Active USAF Tactical Air Force Units. Does Not Include ANG/AFRES Data.
F-18C Data Covers September 1991 to August 1992, Only.

1 April 1993

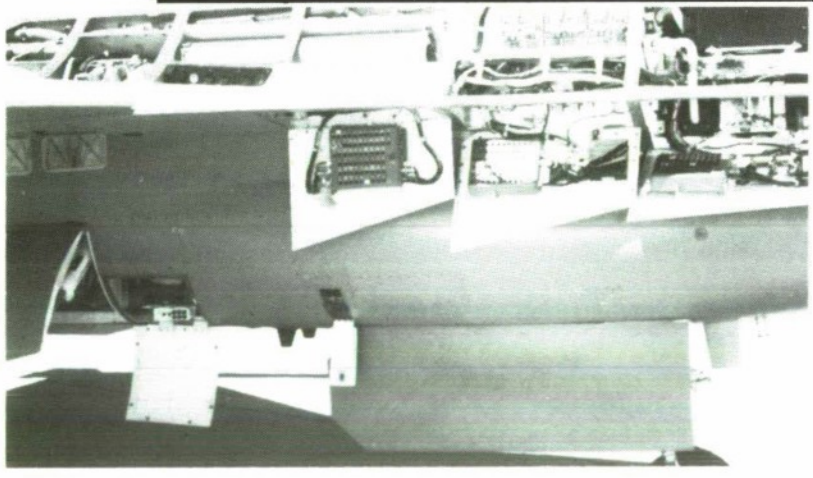
AMC541K

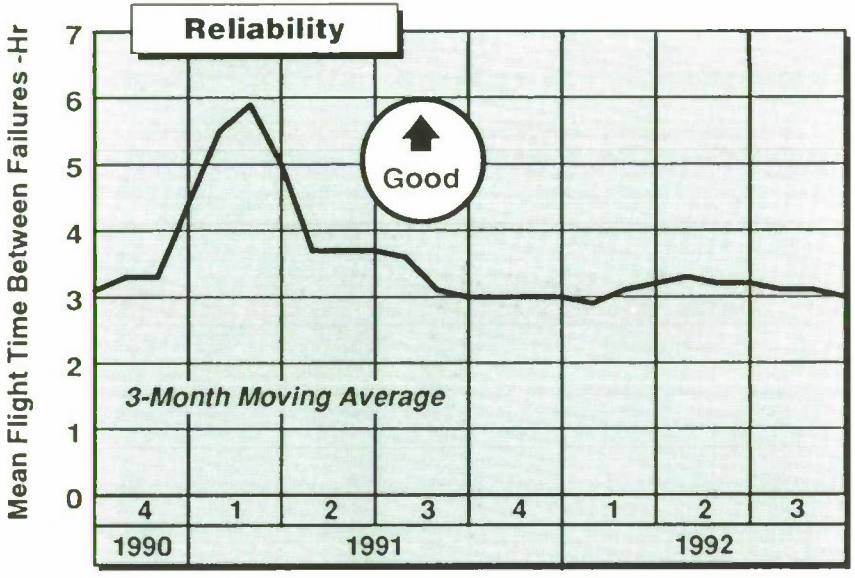
F-16C/D Reliability/Maintainability

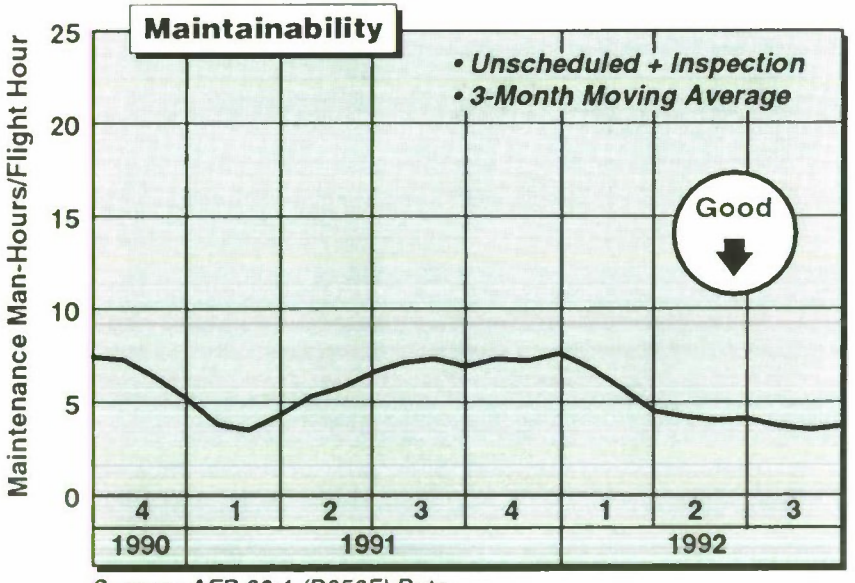
USAF OPERATIONAL UNITS



Early 1991 Improvements Were a Direct Result of Higher Sortie Rate and Longer Duration Flights During Desert Shield and Desert Storm







Source: AFR 66-1 (D056E) Data
Notes: Does Not Include ANG/AFRES Data

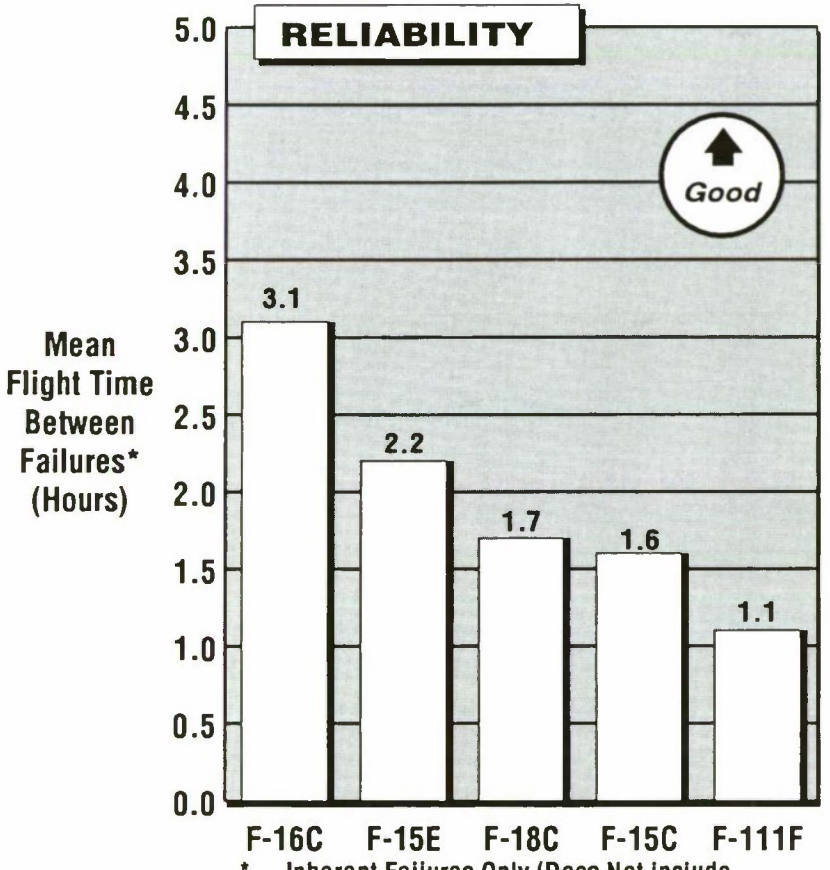
AMC557J

1 April 1993

Reliability/Maintainability Comparisons

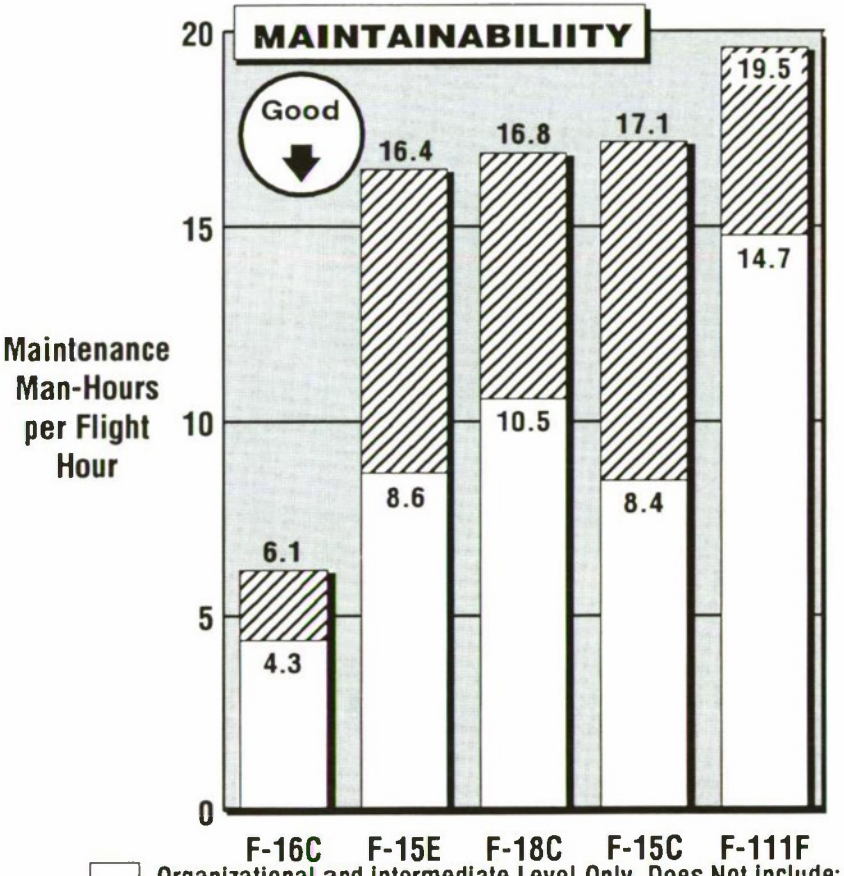
October 1991 - September 1992**

Data Source:
- AFR 66-1 Data for USAF Aircraft (Does Not Include ANG/AFRES Data)
- Navy 3M Data for USN Aircraft



* Inherent Failures Only (Does Not Include Secondary or Induced Failures or "No Defect" Maintenance Events)

** September 1991 - August 1992 for F-18C Only



Organizational and Intermediate Level Only. Does Not Include: Inspections, Depot Maintenance, TCTOs, General Support Such as Servicing, Aircraft Handling, Weapons Loading, and Aircraft cleaning

Organizational and Intermediate Level Only Plus Inspections

1 April 1993

AMC5311C

Safest Multirole Fighter in USAF History

Attrition Rate of 3.97 Losses per 100,000 Hours Throughout the Last Four Years; Comparable with Any Single or Twin-Engine Fighter in the World

1 July 1992

AMC4191C

F-16 Operationally Proven and Supportable Worldwide

- **Worldwide Operations and Support Established**
  - **Over 4.7 Million Flight Hours**
  - **USAF Logistics System Supports Seventeen Air Forces Employing the F-16 in More Than 90 Locations Around the World**
- **Highest Operational Readiness Rate of Any USAF Fighter**
- **Demonstrated High Reliability/Maintainability**

- **Planned Improvement Program To Ensure 21st Century Viability**
- **Planned Production Through the 90s**

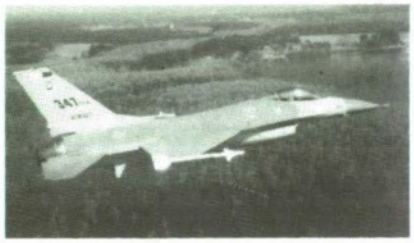
1 April 1993

AMC2516F

F-16A/B

AMC2533

F-16A/B . . . The Choice of Fourteen Air Forces Worldwide



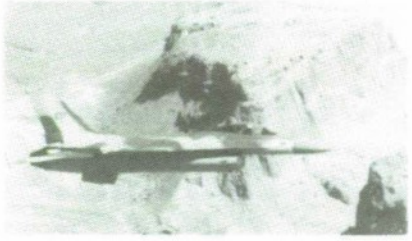
UNITED STATES

BELGIUM

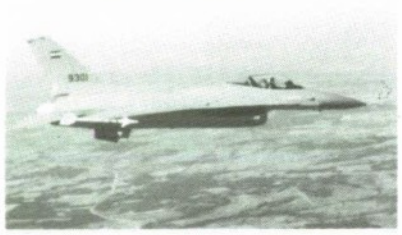
DENMARK

THE NETHERLANDS

NORWAY



ISRAEL



EGYPT

PAKISTAN

VENEZUELA

SINGAPORE

THAILAND

INDONESIA

PORTUGAL

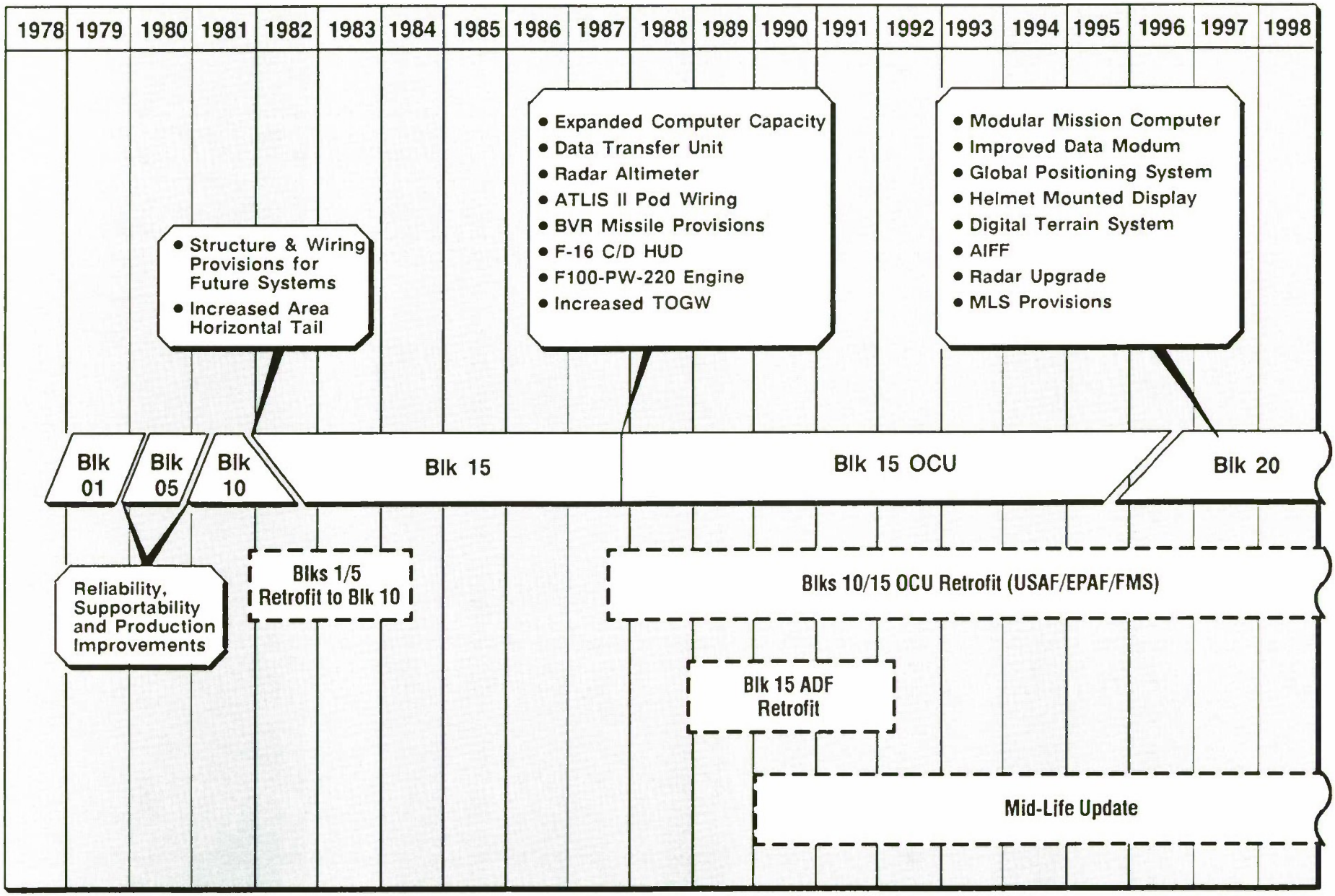
TAIWAN

20 November 1992

CURRENT PLANNED PRODUCTION . . . 1,790

AMC2544D

F-16A/B Improvement Program



AC19696-1B

F-16A/B Current FMS Configuration

COCKPIT
- *Improved g-Tolerance*
- *Bubble Canopy*
- *Data Transfer Unit*
- *Wide Angle Conventional HUD*

AVIONICS
- *Improved APG-66 Multimode Radar*
- *128K Expanded Fire Control Computer*
- *128K Expanded CIU*
- *CARA Radar Altimeter*
- *APX-101 IFF*
- *Ring Laser Gyro INS*

SURVIVABILITY
- *ALR-69 RWR*
- *Increased Chaff/Flares*
- *External ECM*

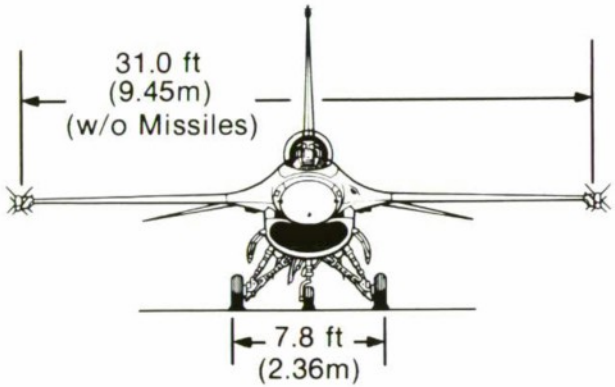
COMBAT EFFECTIVENESS
- *Aerodynamically Advanced Airframe*
- *Fly-by-Wire Flight Controls*
- *E/O FLIR Laser Designator Pod Capability*
- *Penguin Anti-Shipping Missile Capability*
- *AIM-9 All-Aspect Missile Capability*
- *BVR Missile Provisions*
- *Recce Pod Provisions*

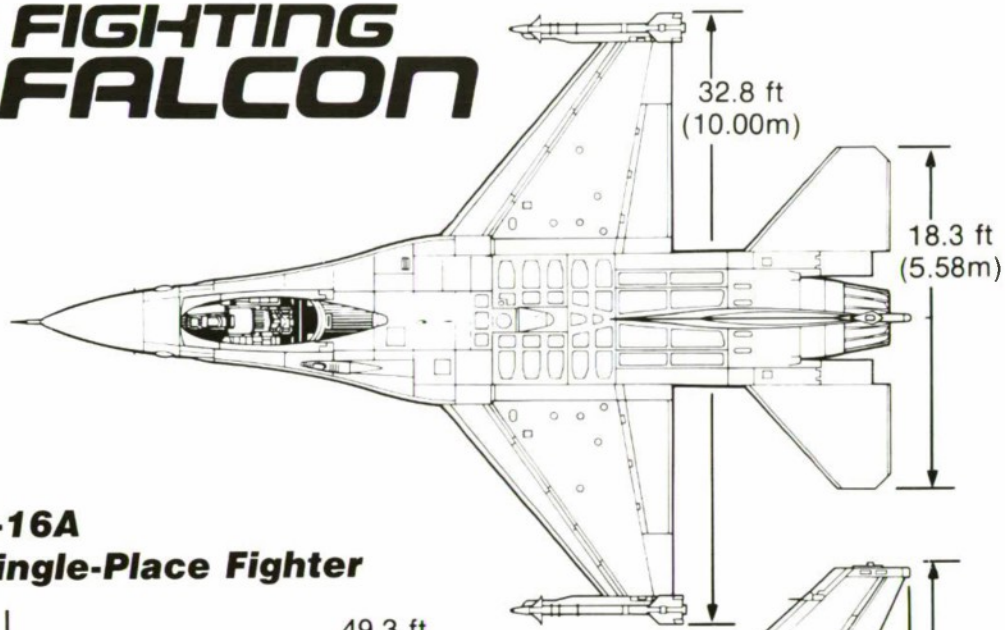
CAPACITY
- *37,500 lb Max TOGW*
- *9-g Capability up to 24,100 lb GW*
- *Cooling: 9 KW ECS*
- *Electrical:*
  - *— 40 kVA Main Generator*
  - *— 5 kVA Emergency Generator*

PROPULSION
- *High T/W F100-PW-220 Turbofan Engine*

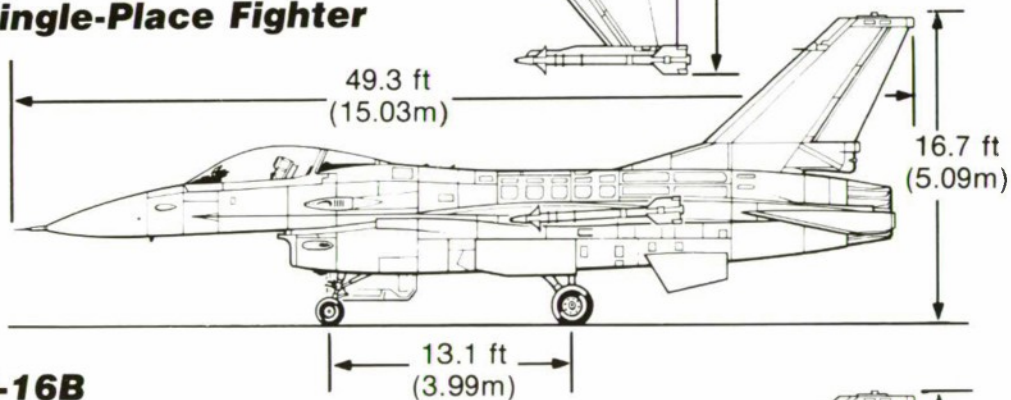
AM26242

F-16A/B FIGHTING FALCON





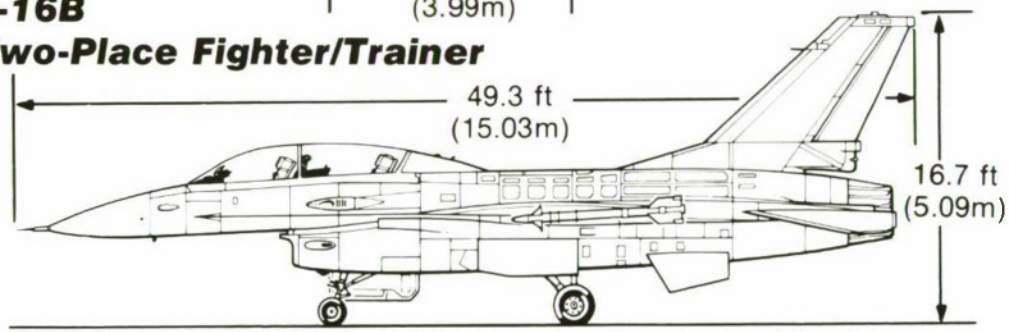
F-16A
Single-Place Fighter



Characteristics

Wing Area	300 sq ft	27.9 sq m
Weight Empty	16,285 lb	7,387 Kg
Internal Fuel	6,846 lb	3,105 Kg
Max Takeoff Gross Wt	37,500 lb	17,010 Kg
Design Load Factor	9g	9g
Service Life	8,000 hours	8,000 hours
Engine	F100-PW-220	F100-PW-220
Thrust Class	24,000 lb	106.75 kN

F-16B
Two-Place Fighter/Trainer

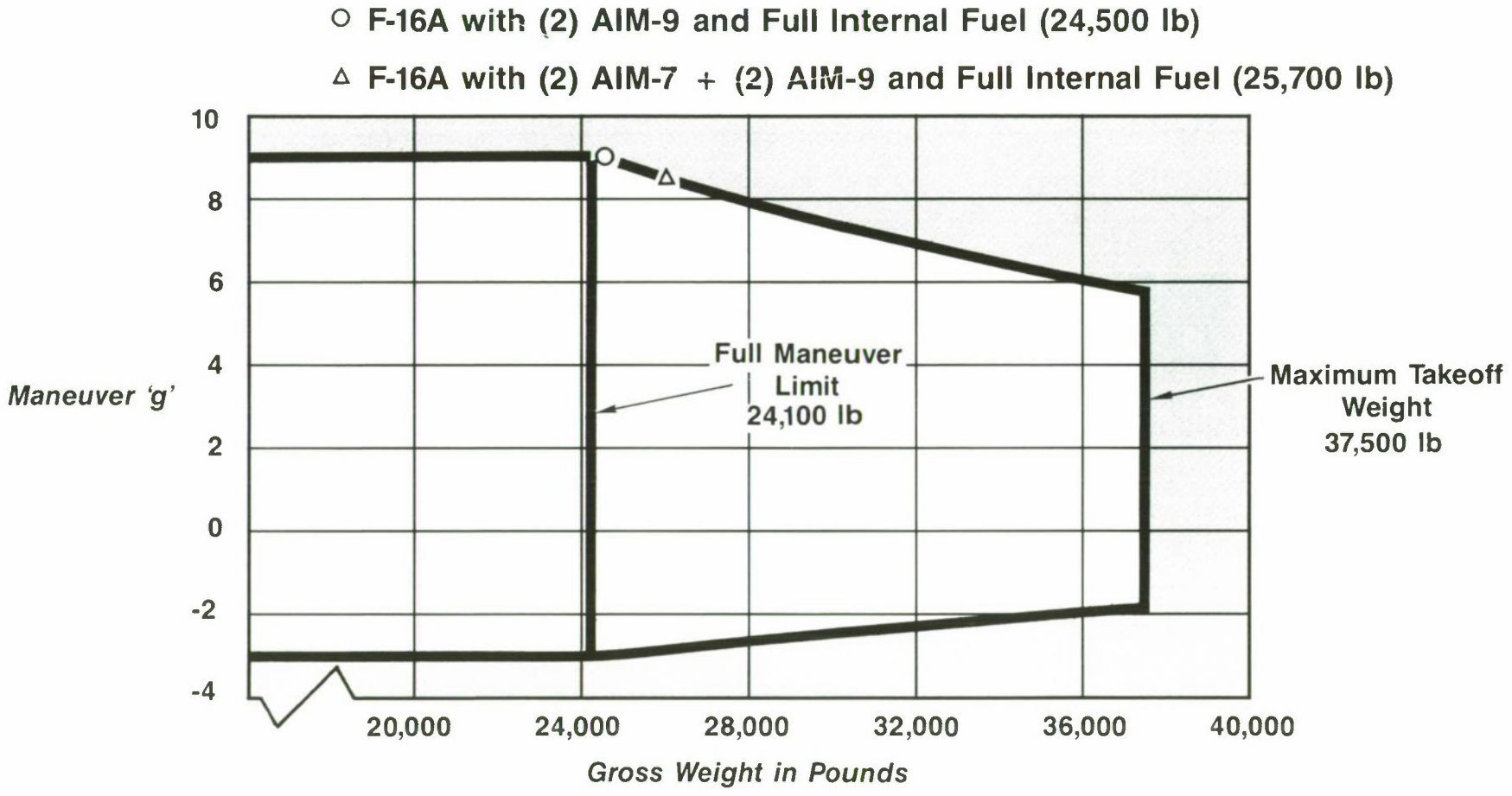


Characteristics

Wing Area	300 sq ft	27.9 sq m
Weight Empty	16,928 lb	7,678 Kg
Internal Fuel	5,659 lb	2,567 Kg
Max Takeoff Gross Wt	37,500	17,010 Kg

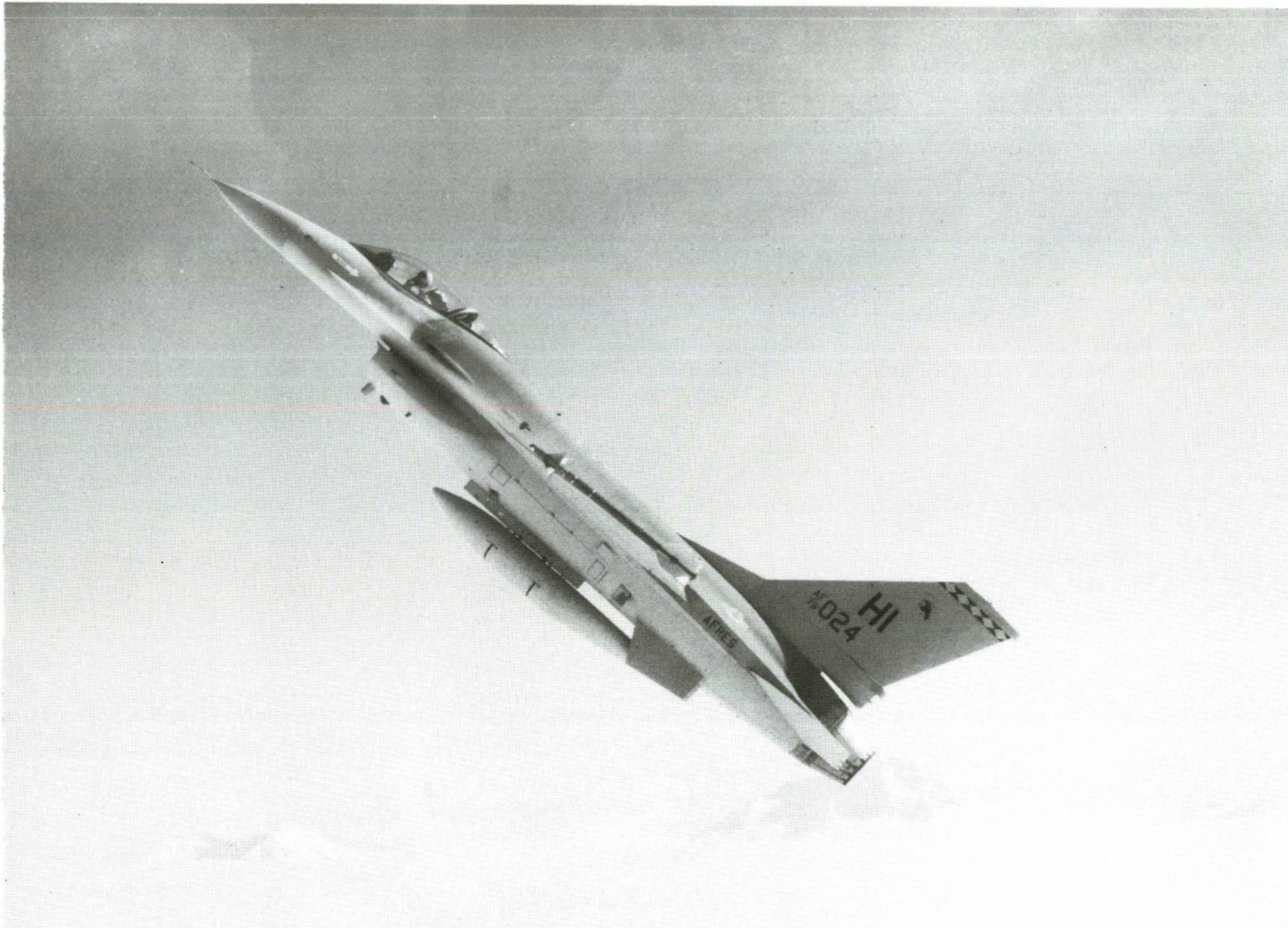
AM22423C

The F-16A Is a 9-g Fighter



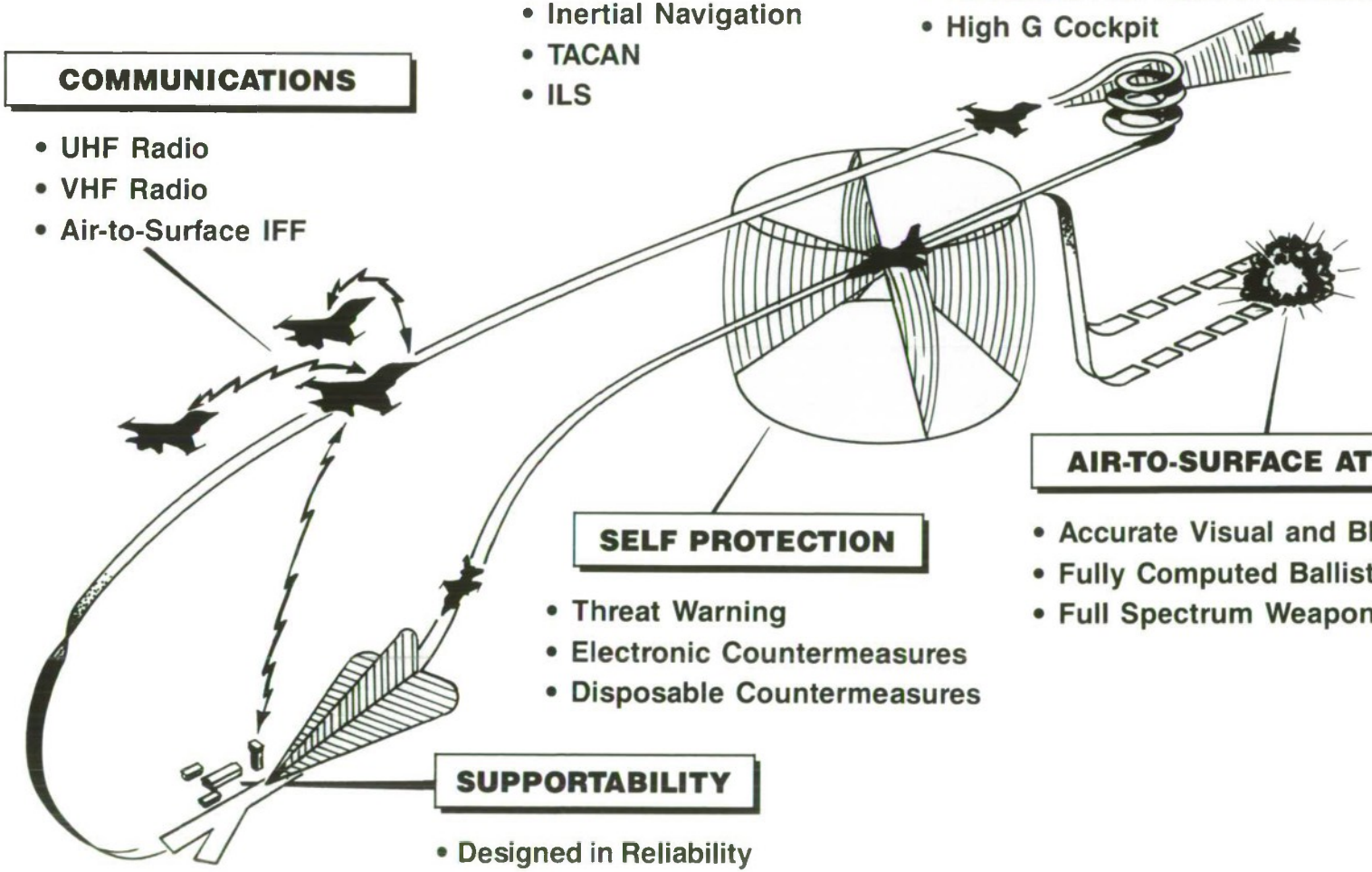
- 8,000-Hour Design Service Life
- Aircraft Durability Demonstrated to 16,000 Hours

AM10332C



AM26243

F-16 Avionics Provide Multirole Capabilities



AIR-TO-AIR COMBAT

- Self-Contained Intercept
- Advanced Fire Control Solutions
- High G Cockpit

NAVIGATION

- Inertial Navigation
- TACAN
- ILS

COMMUNICATIONS

- UHF Radio
- VHF Radio
- Air-to-Surface IFF

AIR-TO-SURFACE ATTACK

- Accurate Visual and Blind Deliveries
- Fully Computed Ballistic Solutions
- Full Spectrum Weapons Capability

SELF PROTECTION

- Threat Warning
- Electronic Countermeasures
- Disposable Countermeasures

SUPPORTABILITY

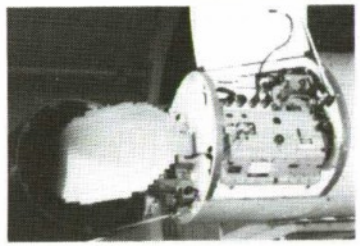
- Designed in Reliability
- Self Test/Built-In Test
- Quick Replacement

AM5420

F-16A Digital Avionic System Features

Fire Control Radar AN/APG-66

• Westinghouse



- Multimode
- Long-Range Detection
- Auto Acquisition
- Situation Awareness Mode (SAM)
- High Resolution Ground Map, 8:1 DBS

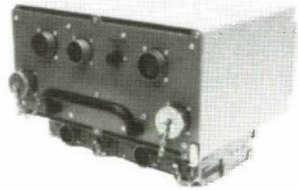
Expanded Fire Control Computer (XFCC)

• Delco

- Memory — 128K/Speed - 385 KOPS
- Dual 1553/1553B Multiplex Bus Controller
- Weapon Delivery Computations

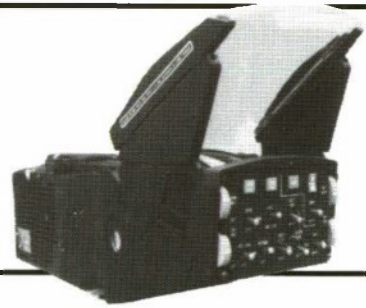
Expanded Central Interface Unit (XCIU)

• EFW



- Dual Redundant Processors
- Memory — 64K per Processor
- Automatic Weapons Control
- Weapons Multiplex Bus Controller

Wide-Angle Head-Up Display

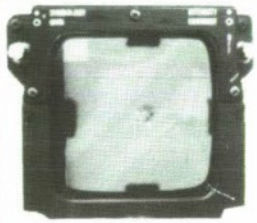
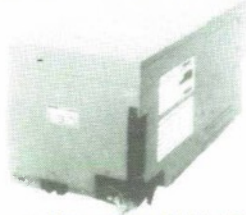
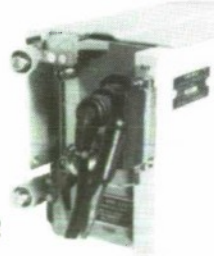


• GEC Avionics

- Flight Information Cues
- Air-to-Air Gunnery and Missile Dynamic Launch Zone Symbology
- Air-to-Ground Weapon Delivery and Target Locations Cues
- Raster Scan for FLIR Projection

AMC15426

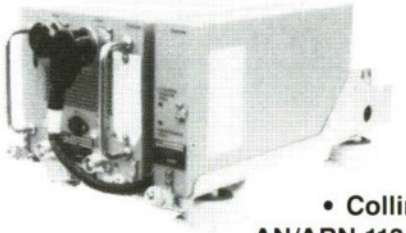
F-16A Digital Avionic System Features (Cont.)

Displays	• Kaser  *Radar/Electro-Optical* • EFW  *Weapons Management*	• Air-to-Air/Air-to-Surface Radar Image Displays • TV Video Displays • Electro-Optical Weapon Displays • Stores Inventory • Weapons Control/Selection
Inertial Navigation (RLG)	• Litton LN-93  • Honeywell H-423 	• Form/Fit/Function Replacement for Existing System • High Reliability • Two-Level Maintenance
Data Transfer Unit	 • Fairchild	• Instant Ground or Airborne Data Entry/Retrieval • Facilitates Mission Planning • Reduces Pilot Workload • Provides Detailed Maintenance Data
Radar Altimeter (CARA)	 • Gould AN/APN-232	• Selectable Radar or Barometric Altitudes Displayed on HUD • Optimized for Low-Level Flight • Low-Altitude Warning Feature Enhances Safety

AMC15427

F-16A Digital Avionic System Features (Cont.)

Radio Navigation



• Collins
AN/ARN-108 ILS

• Collins
AN/ARN-118 TACAN

- Enroute and Terminal Versatility
- All-Weather Navigation and Recoveries

Communication

• Collins
AN/ARC-186 VHF

• Magnavox
AN/ARC-164
UHF

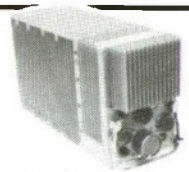
- Tactical Flexibility
- Versatile Communications

Identification (IFF)

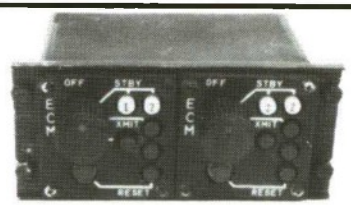
• Teledyne
AN/APX-101

- Positive Identification
- Ground Control

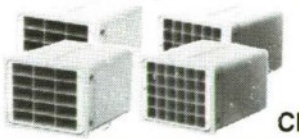
Self-Protection



• Digital Radar
Warning Receiver



ECM
Pod Controller



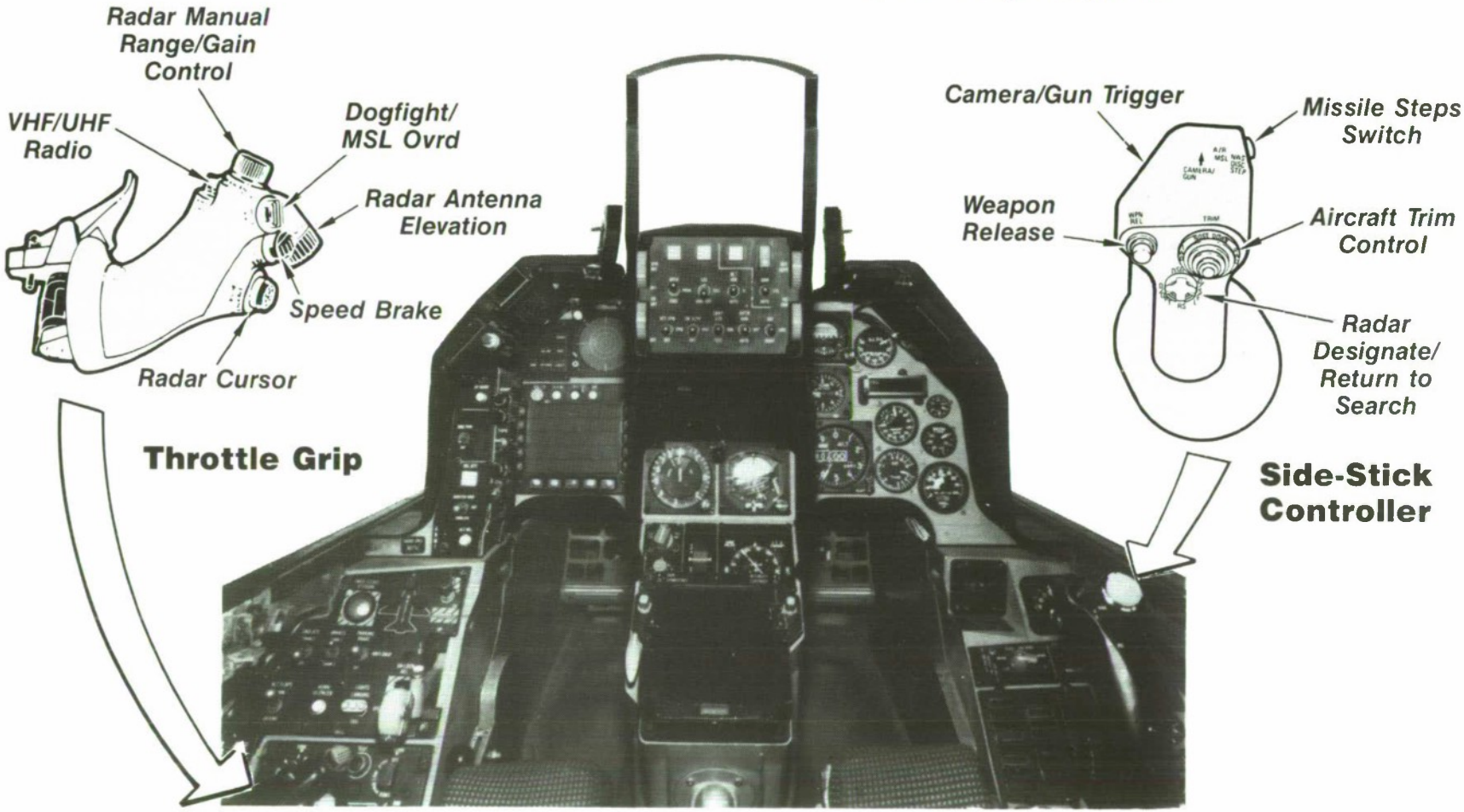
• Tracor
Chaff & Flare Dispensers (4)

- Programmable Threat Data
- AAA, SAM & AI Responsive
- Radar & IR Countermeasure

AM4162B

F-16A Integrated Aircraft/Radar Controls Allow Head-Up Operation

- Head-Up and Hands-On Throttle-and-Stick Control of the Weapon System



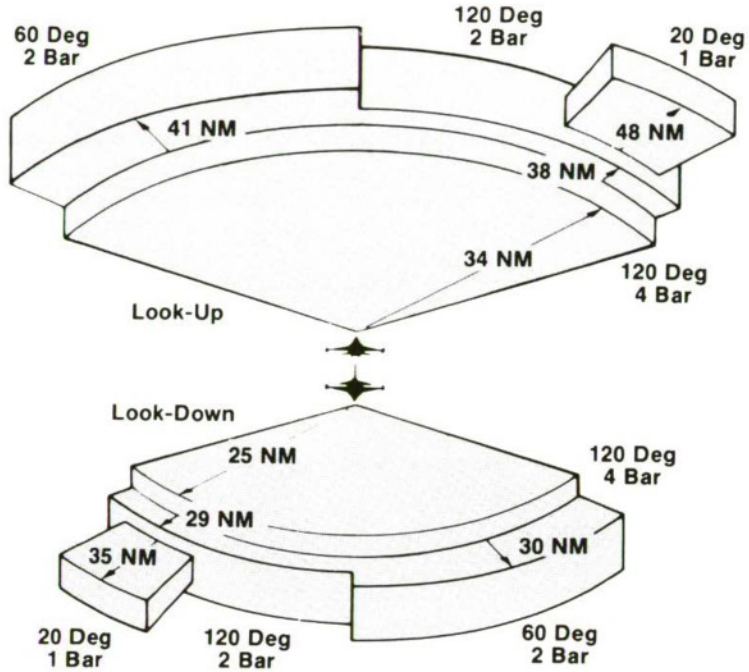
Optimum Hands-On Pilot Control

AM4399

Air-to-Air Radar Capability

PILOT SELECTABLE

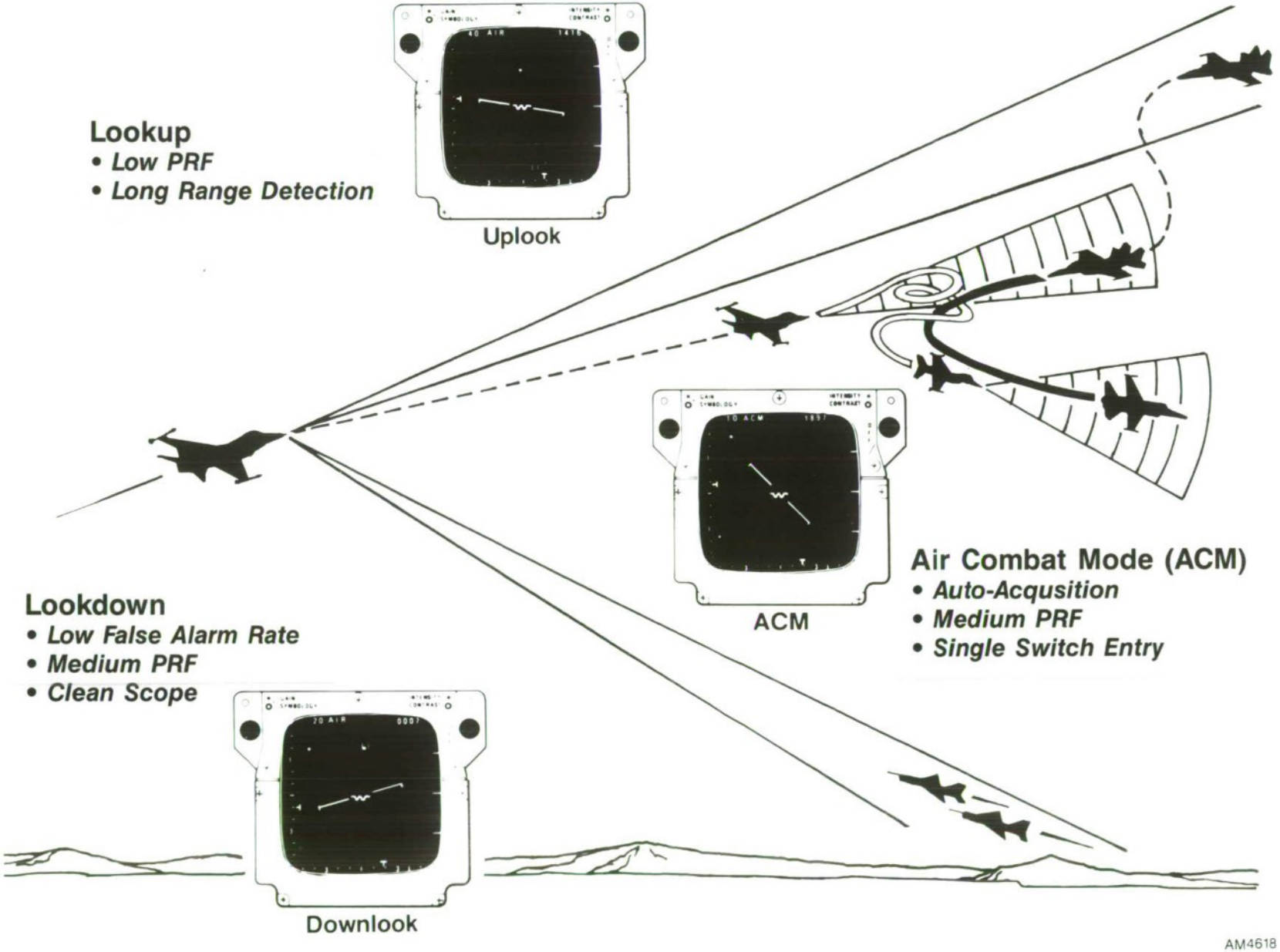
- ±10°, ±30°, ±60° SCAN
- 1, 2, 4 Bar Search
- 10, 20, 40, 80 n.mi Scales
- 1, 2, 3, 4 Target Positions Refreshed on Each Sweep
- Auto Mode Allows Radar Operation to Be Controlled By Stores Management System
- Air Combat Mode Provides Auto Lock on Within 10 n. mi



Radar Control Panel

AM4384B

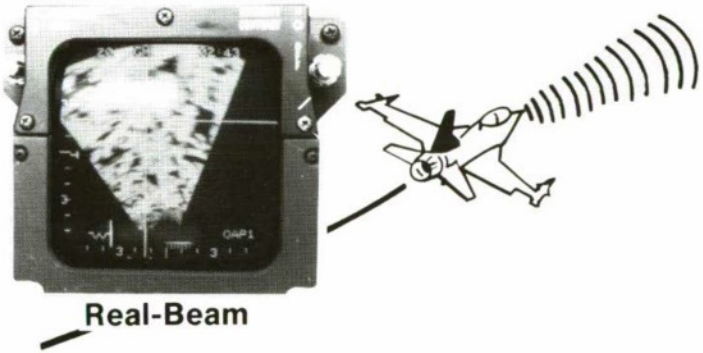
APG-66 Air-to-Air Radar Operation



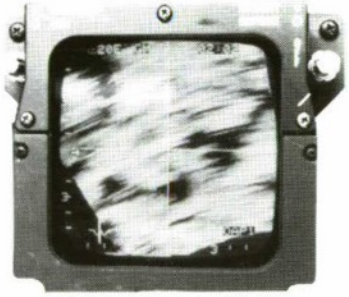
AM4618

Air-to-Surface Radar Operation

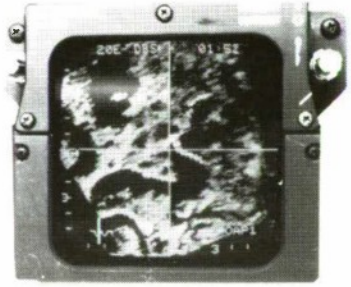
- Air-to-Ground Ranging
- Real-Beam Ground Map
- Expanded Scale
- Doppler Beam Sharpened Map
- Beacon
- Two Sea Search Modes
- Freeze



Real-Beam



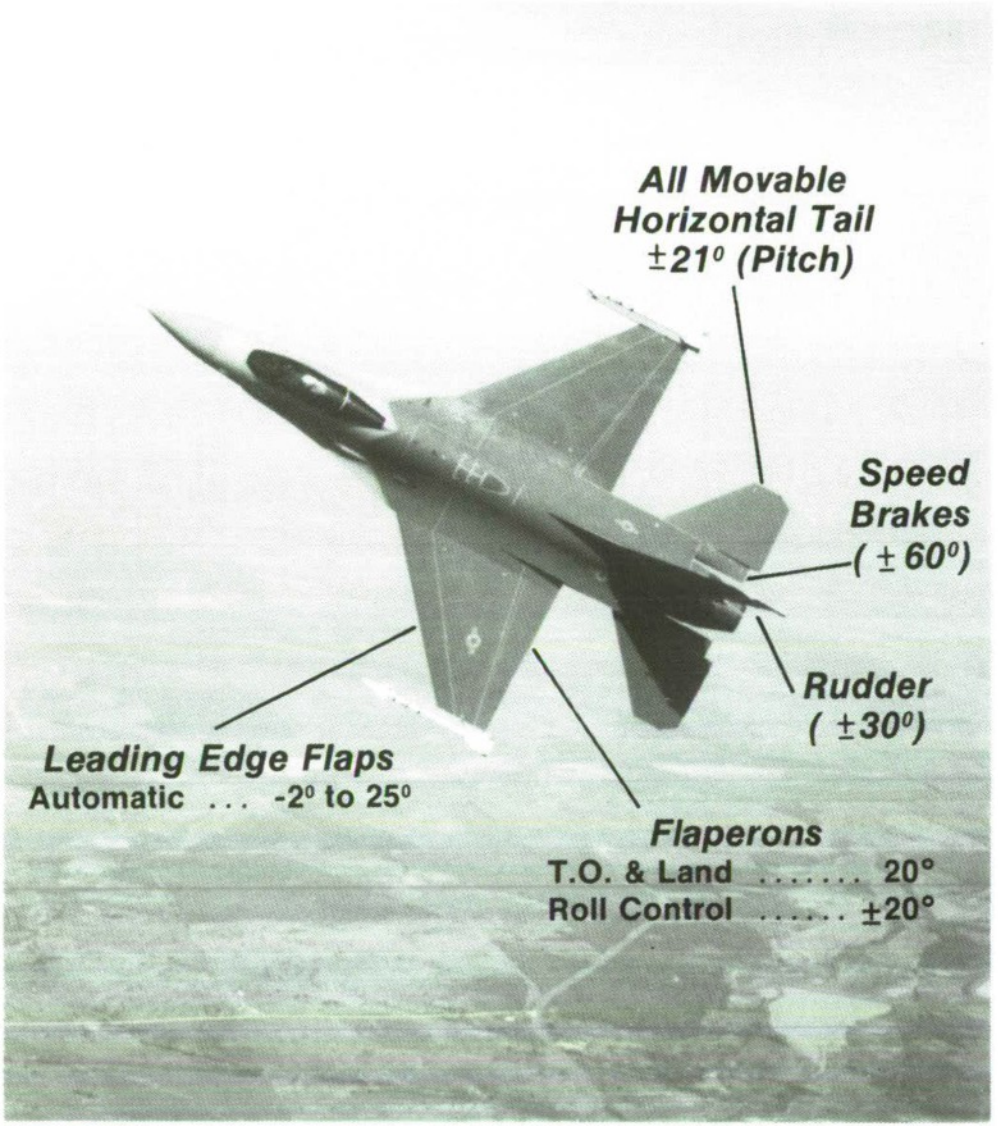
Expanded



DBS

AM1692A

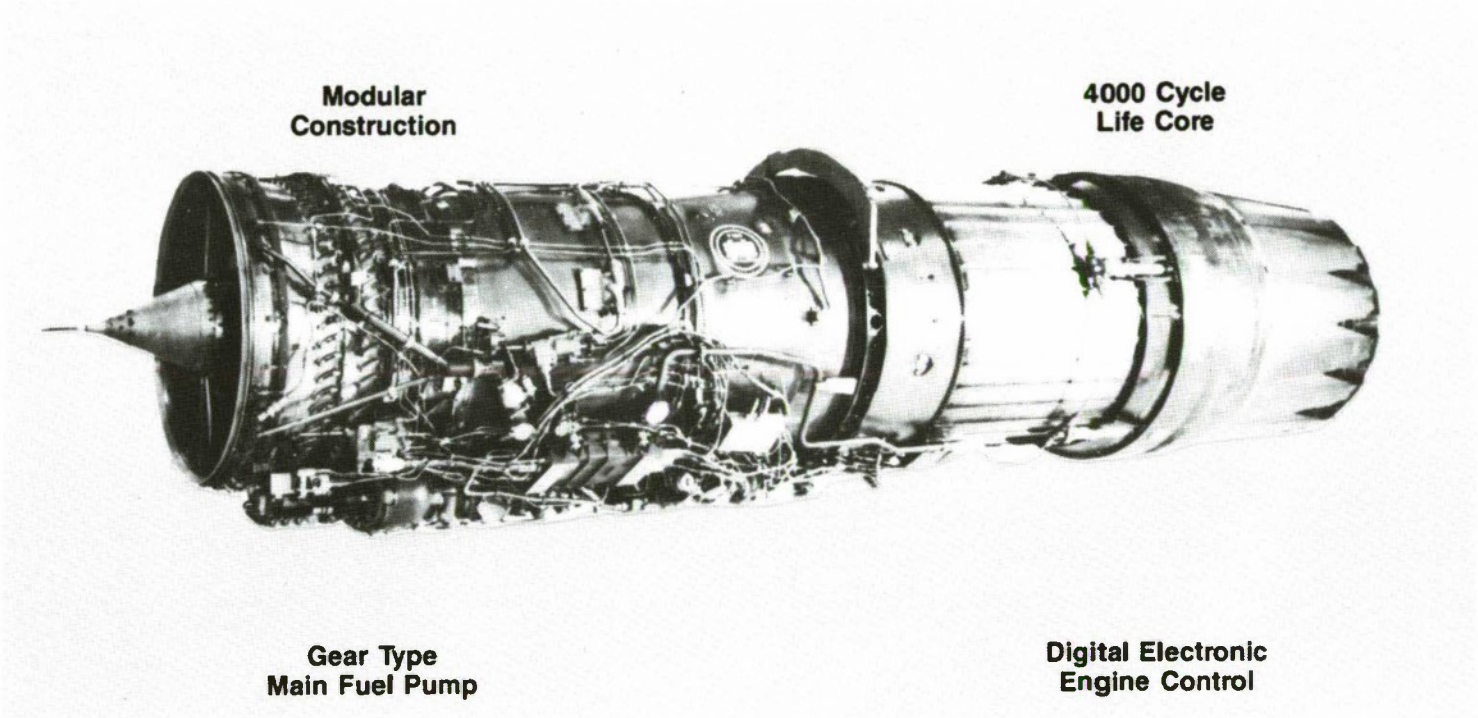
F-16A Basic Systems



FLIGHT CONTROL SYSTEM	4-Channel Fly-by-Wire
HYDRAULIC POWER	(2) 3000 PSI, 42 GPM 22 GPM Back-Up
ELECTRICAL POWER	40 KVA Primary 5 KVA Back-Up 15 Amp/Hr Battery
EMERGENCY POWER UNIT	Bleed Air or (70/30) Hydrazine/ Water Powered Back-Up Hyd and Elect Supplies
ENVIRONMENTAL CONTROL	F-16A/B Common
FUEL SYSTEM	Integral Fuel Tank System with Halon Inerting Single Point Refuel Air Refueling Int. - F-16A - 1053 Gals - F-16B - 871 Gals Ext. - 2 - 370 Gals - 1 - 300 Gals
AUTOPILOT	Attitude (Pitch & Roll), Altitude & Heading Hold
SELF-START	Ground/Air Jet Fuel Starter
LANDING GEAR	Normal — Hydraulic Back-Up — Pneumatic Brake-by-Wire Nose Wheel Steering Parking Brake Arresting Hook

AM668A

F100-PW-220 Turbofan Engine



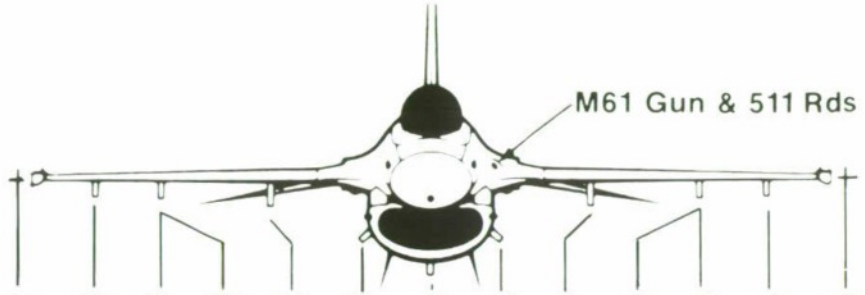
PERFORMANCE and CHARACTERISTICS*
(Standard Day, Sea Level Static, Uninstalled)

Maximum Thrust	23,770 lb	By-Pass Ratio	0.60
Intermediate Thrust	14,590 lb	Pressure Ratio	24.9
Airflow	224 PPS	Weight	3,234 lb
Thrust/Weight	7.4	Length	191 in.
		Diameter (Nominal)	46.5 in.

** P&W Spec No. CP11344A; Quoted Thrust Is "Average Thrust" (as of 8/7/91)*

AMC3493

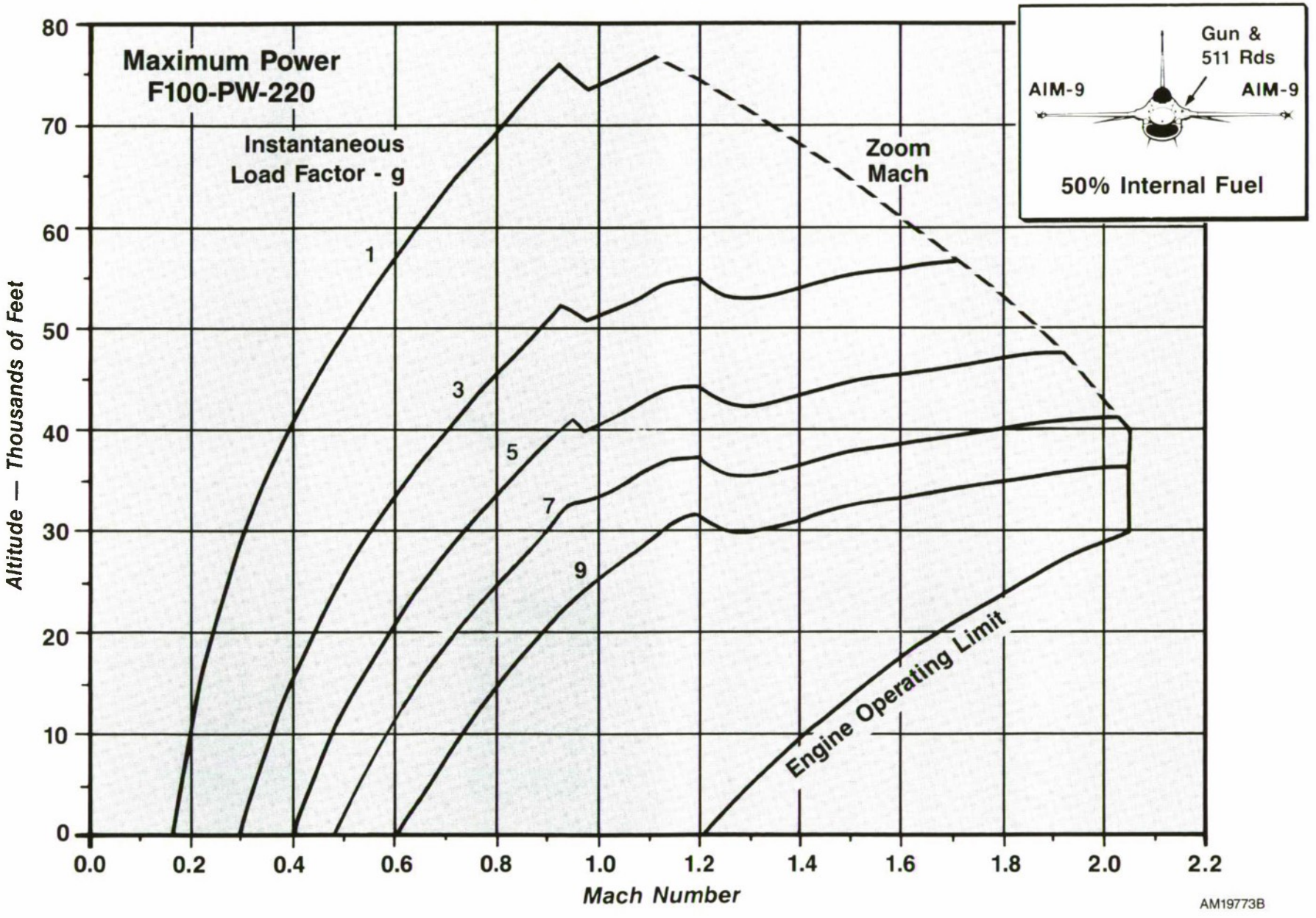
F-16 Weapons Carriage Capability



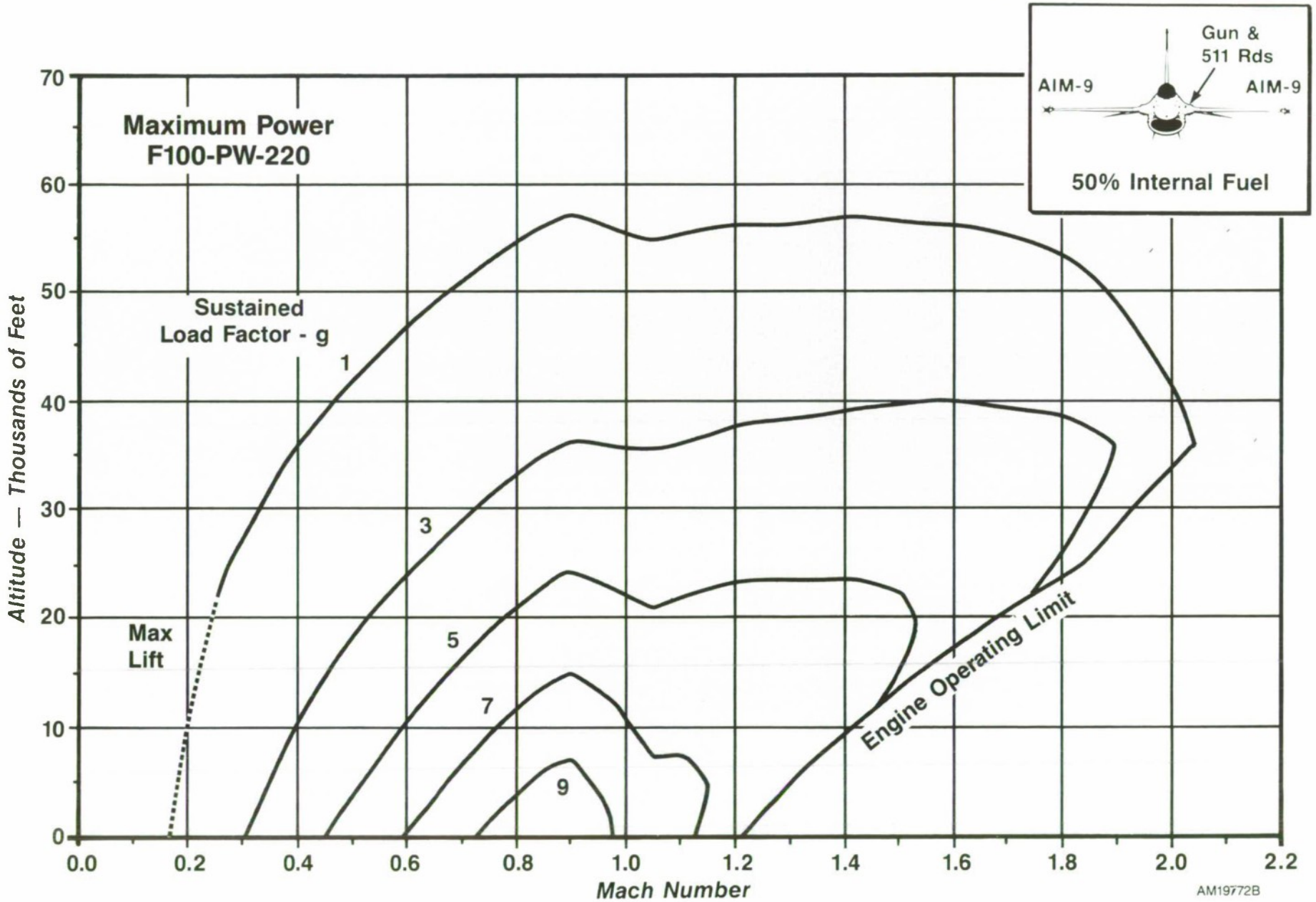
	Station Stores	9	8	7	7A	6	5R	5	5L	4	3A	3	2	1
Air-to-Air Weapons	AIM-9 Missiles	✕	✕		✕						✕		✕	✕
	Advanced BVR Missiles	✕	✕		✕						✕		✕	✕
	BVR Missiles			✕								✕		
Pods	ECM			✕				✕				✕		
	EO/FLIR/TF (Provisions)			✕			✕		✕					
	Recce (Growth)			✕				✕						
	30mm Gun Pod (Growth)							✕						
Air-to-Surface Weapons	MK-82			✕		✕				✕		✕		
	MK-84			✕		✕				✕		✕		
	Dispensers			✕		✕				✕		✕		
	Air-to-Surface Missiles			✕								✕		
	Anti-Radiation Missiles			✕								✕		
	Anti-Shipping Missiles			✕		✕				✕		✕		
Fuel Tanks	370-Gallon					✕		✕		✕				
	300-Gallon							✕						
	600-Gallon (Option)					✕				✕				
STATION CAPACITY	Capacity (lb)	425	700	3500	450	4500	550	2200	550	4500	450	3500	700	425
	Load Factor (g)	9.0	5.5	5.5	9.0	5.5	9.0	5.5	9.0	5.5	9.0	5.5	5.5	9.0
	Alternate Cap. at 9g	425	450	2000	450	2500	550	1200	550	2500	450	2000	450	425

AMC2524C

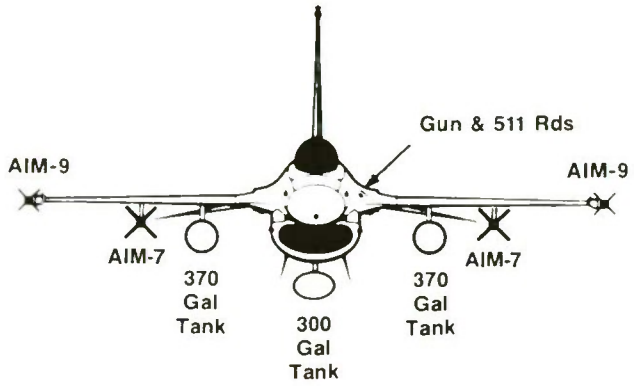
F-16A Instantaneous Maneuverabilty



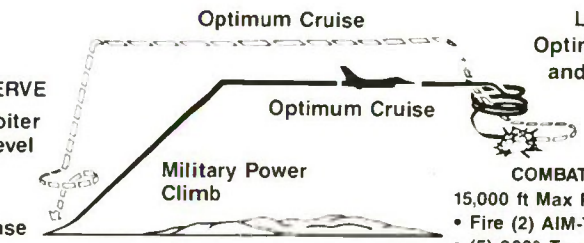
F-16A Sustained Maneuverability

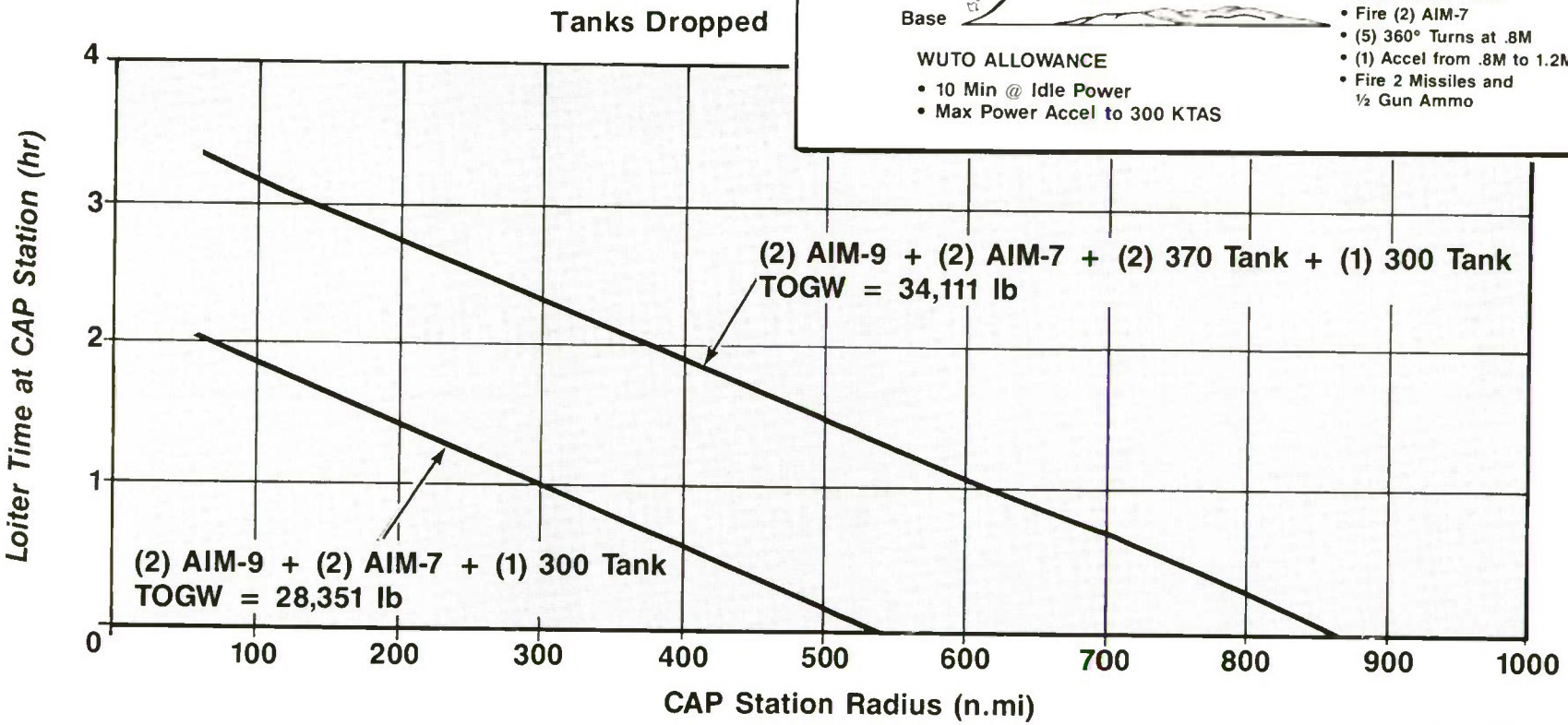


F-16A Air-to-Air Combat with Loiter



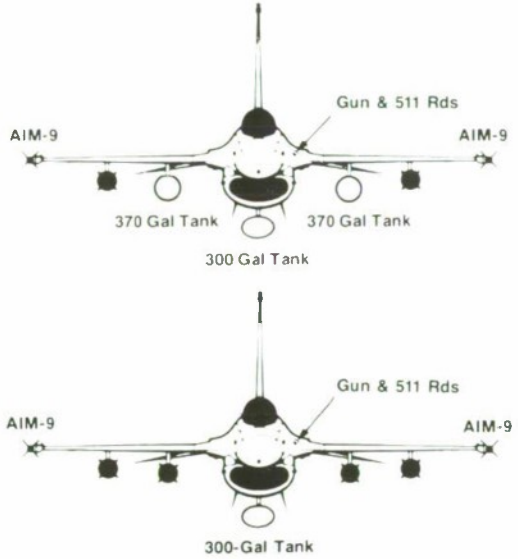
Mission Profile



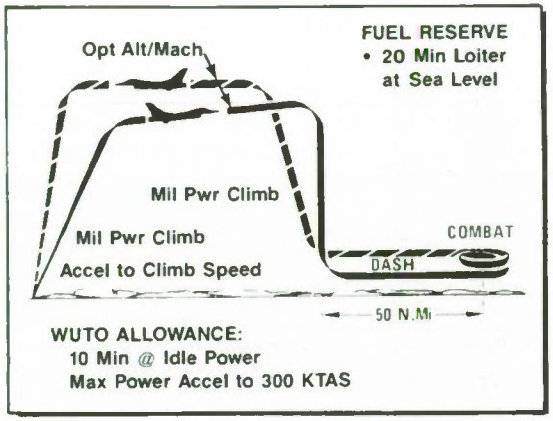


AM19256A

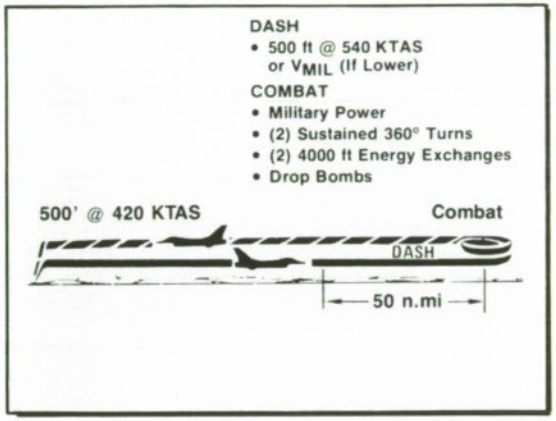
F-16A Air-to-Ground Mission



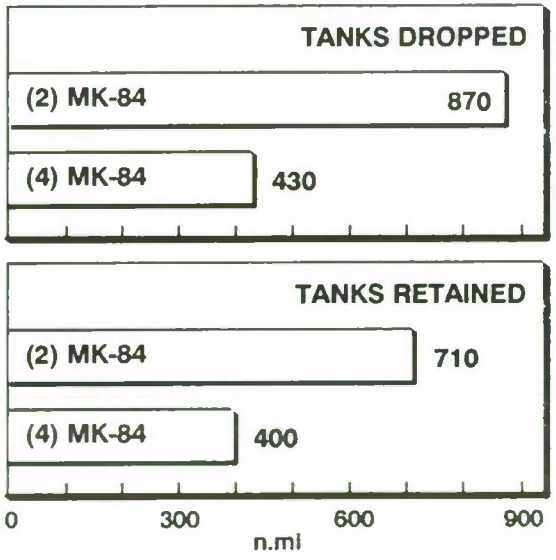
Hi-Lo-Lo-Hi



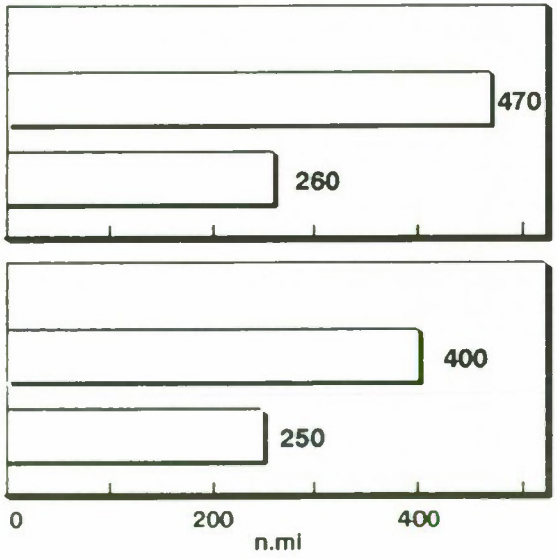
Lo-Lo-Lo-Lo



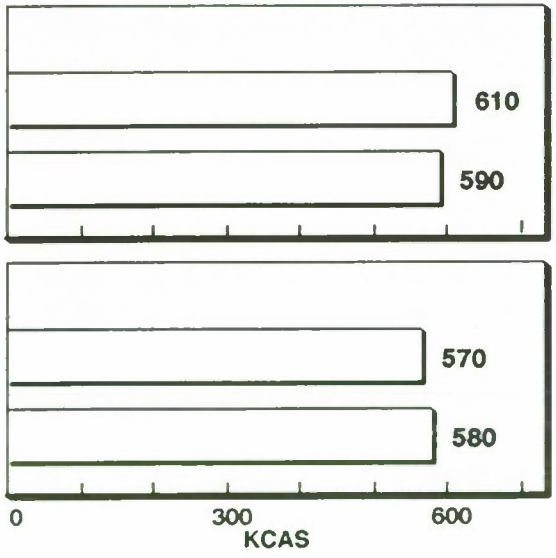
Mission Radius Hi-Lo-Lo-Hi



Mission Radius Lo-Lo-Lo-Lo



Ingress Speed Potential – Military Power



ACA0473A

F-16 Air Defense Fighter

AMC15635

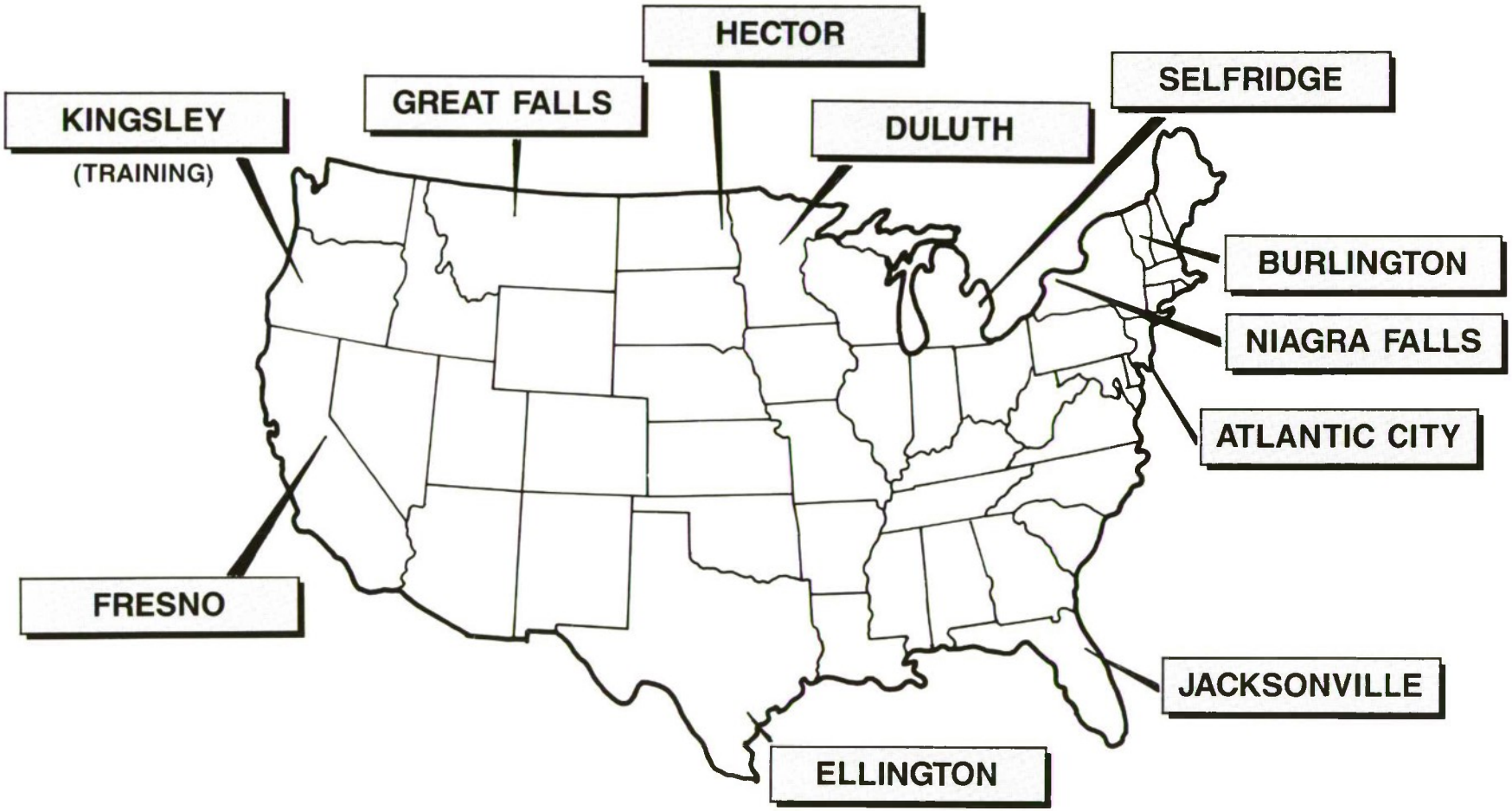
F-16 Air Defense Fighter - Interceptor

- Provides Strategic Air Defense for the United States
  - 11 Squadrons on Alert Since 1989
    - 270 First Line Fighters
  - 16 Air Forces Around the World, Including Four in Europe, Already Depend on the F-16 in Air Defense/Interceptor Role
    - Starting Air Defense Alert in 1979

- Operationally Proven
  - Choice of Weapons
    - Beyond-Visual-Range Radar Missiles (AIM-7 Sparrow and AIM-120 AMRAAM)
    - IR Missiles (AIM-9 Sidewinder)
    - 20-mm "Gatling" Gun
  - Short Scramble Launch Time
  - Long Endurance - Extended Mission Radius
  - High Lethality - Over 60 Air-to-Air Victories

AMC15240

F-16 Air Defense Bases in U.S.

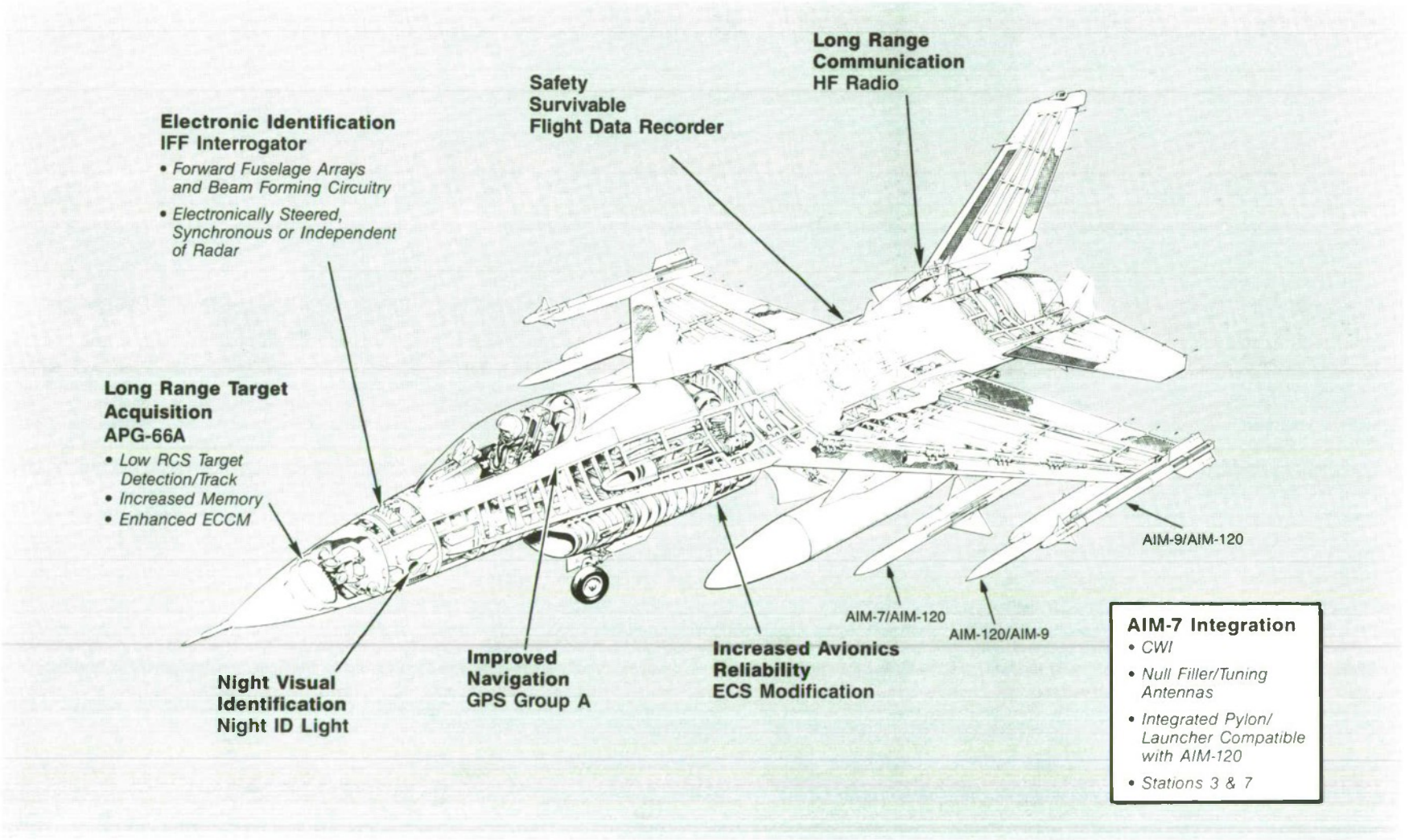


- F-16 Operated by Air National Guard Units
- Aircraft Flown by Part-Time Pilots

AMC3147A

F-16A Air Defense Fighter Configuration

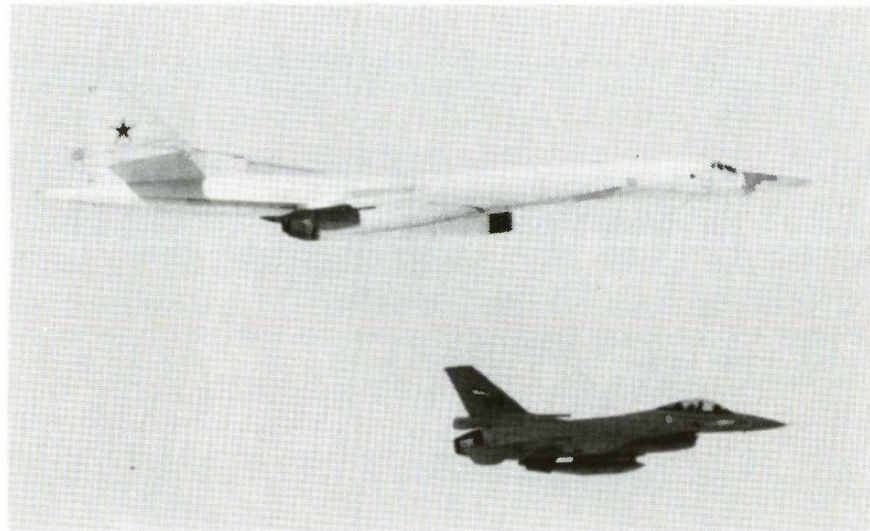
- Baseline — Block 15 with Operational Capabilities Upgrade (OCU)
  — Expanded Computers and AMRAAM (6 Sta, Level III)



A M3641C

Summary of Key F-16 AD Capabilities

- Long Range Cruise Performance
- Long Range Communication/ Navigation
- Electronic Identification
  - Friendly
  - Hostile
- Visual ID
  - Day/Night/Weather



- Effective Weapons Delivery
  - Accurate Missile Launch Envelope Computations
  - Reliable Interface
  - Simple Pilot Task
- High Levels of Reliability, Maintainability, and Availability
- Rapid Sortie Generation/High Readiness
- Low Cost and Attrition

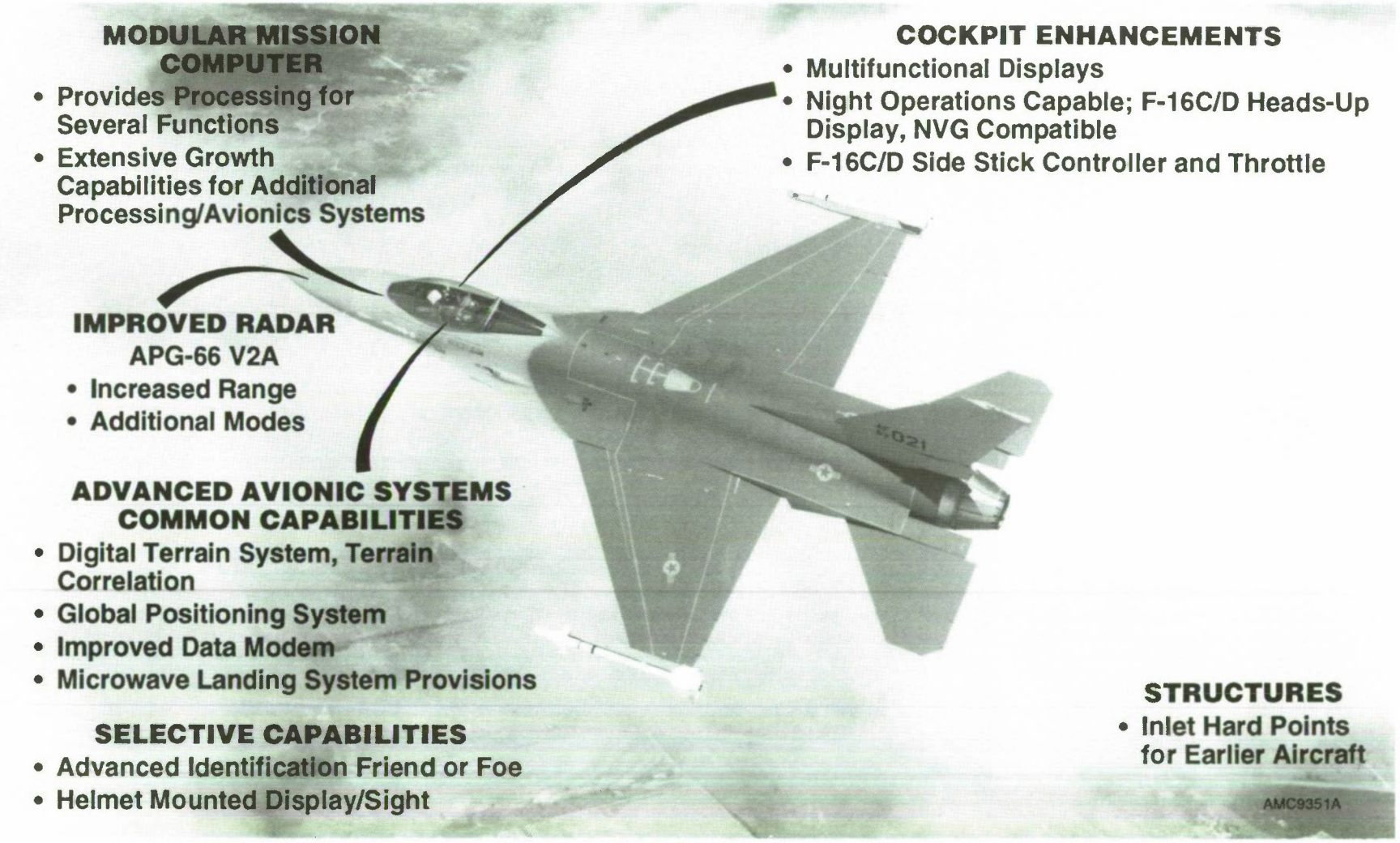
AMC15242

Mid-Life Update Program

AMC15636

F-16 Mid-Life Update Program

- Retrofit To Existing F-16A/B Aircraft
- Cooperative Program for Five Air Forces
  - Belgium
  - Denmark
  - Norway
  - The Netherlands
  - The United States



MODULAR MISSION COMPUTER
- Provides Processing for Several Functions
- Extensive Growth Capabilities for Additional Processing/Avionics Systems

IMPROVED RADAR
APG-66 V2A
- Increased Range
- Additional Modes

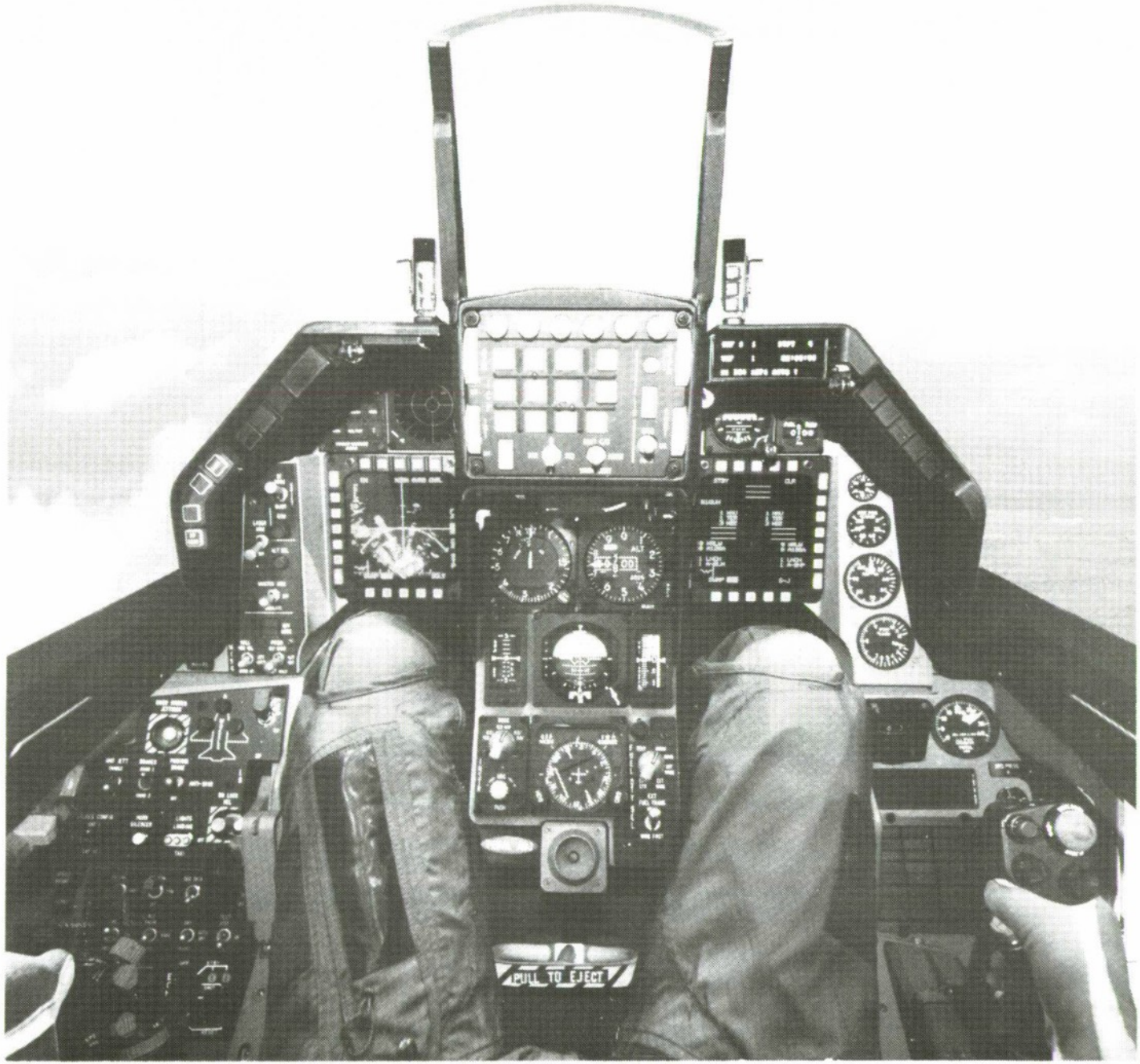
ADVANCED AVIONIC SYSTEMS COMMON CAPABILITIES
- Digital Terrain System, Terrain Correlation
- Global Positioning System
- Improved Data Modem
- Microwave Landing System Provisions

SELECTIVE CAPABILITIES
- Advanced Identification Friend or Foe
- Helmet Mounted Display/Sight

COCKPIT ENHANCEMENTS
- Multifunctional Displays
- Night Operations Capable; F-16C/D Heads-Up Display, NVG Compatible
- F-16C/D Side Stick Controller and Throttle

STRUCTURES
- Inlet Hard Points for Earlier Aircraft

AMC9351A



F-16A/B Mid-Life Update Cockpit

Integrated for Head-Up — Hands-On Combat Engagements

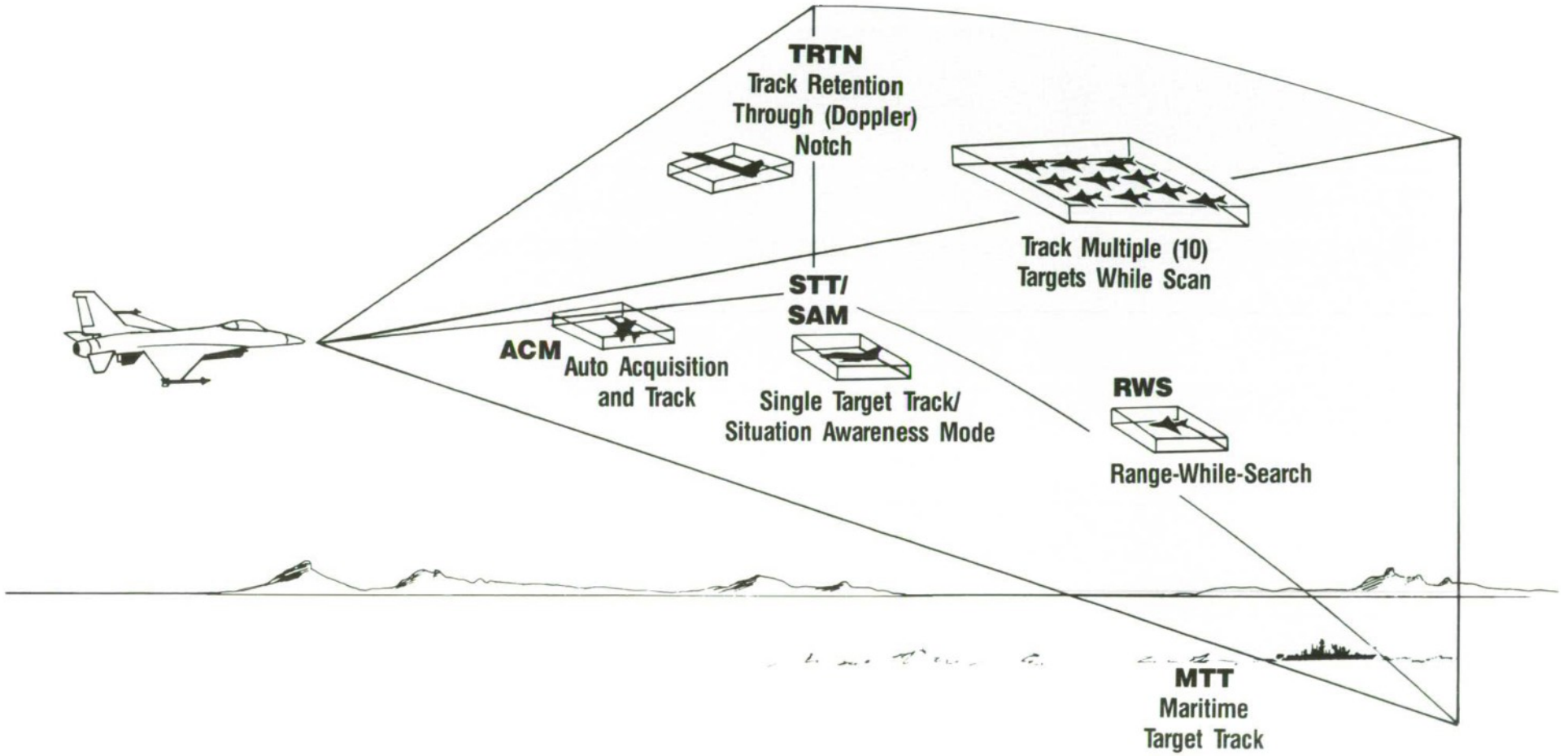
Features

- Two 4″ Monochromatic Displays
- WAC HUD
- Up Front Controls
- Block 50 Side Stick Controller and Throttle

AM23021C

APG-66(V) Radar Provides Multimode Air-to-Air Capabilities

- All Weather Detection Acquisition and Tracking



AM23754B

Advanced APG-66(V) Radar

Improvements Over Standard APG-66

- 100% Increase in Reliability; 200 Hours MTBF
- 55 lb Weight Reduction
- 320 Watt Reduction in Power Dissipation
- Reduced Costs

Increased Operational Capabilities

- 20%-25% Increased Detection Range
- Multitarget (10) Track-While-Scan
- Incorporates Automatic or Manual Primary Target Acquisition
- *• Weather Avoidance
- *• Two Target Situation Awareness Mode
- *• Raid Awareness Mode
- *• Helicopter Detection

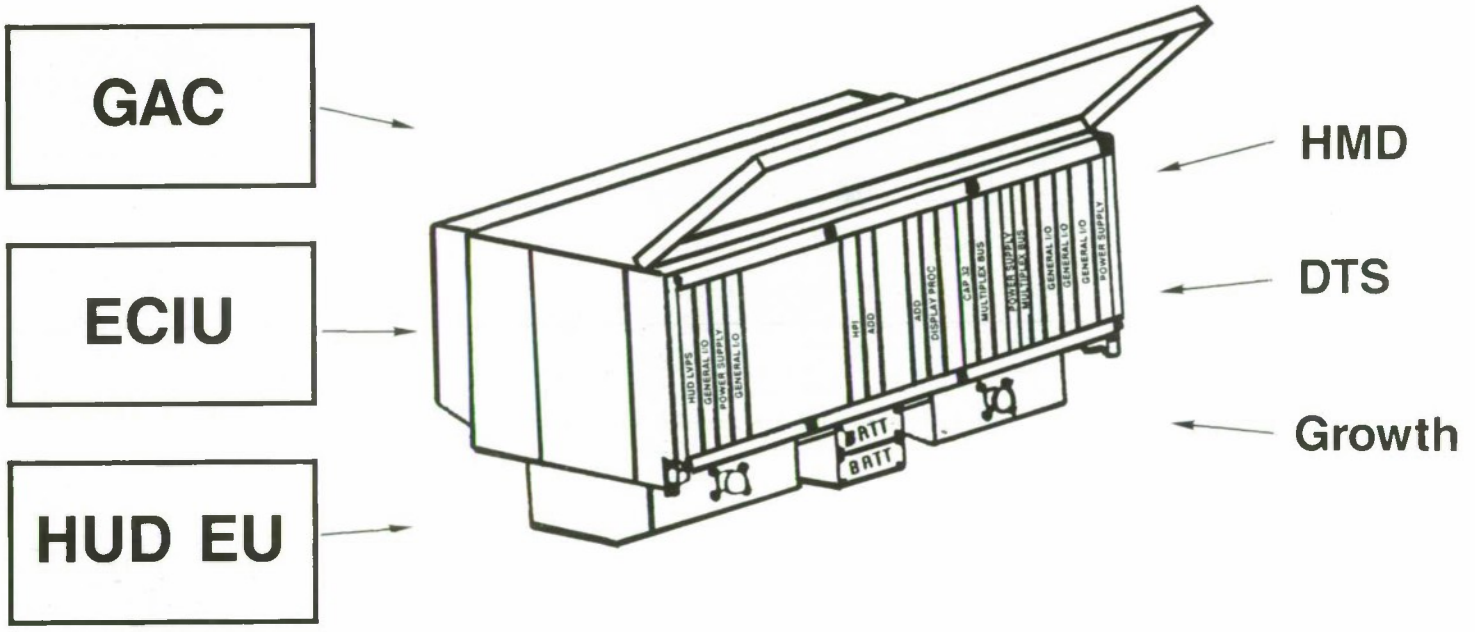
* *Growth*

AM23761B

F-16 Modular Mission Computer

Existing Boxes

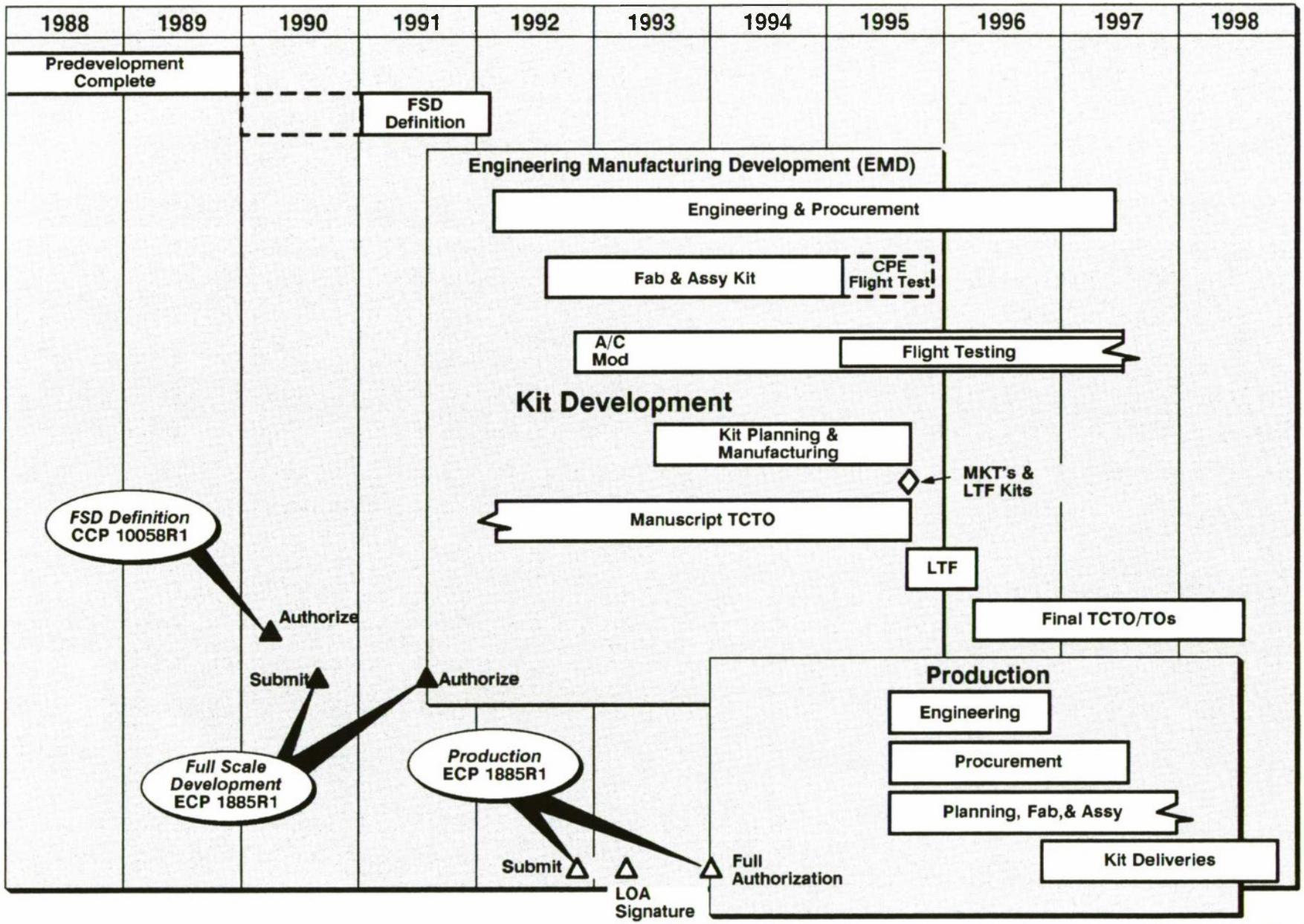
New Capabilities



- MMC Incorporates the Functions of Three Exiting LRUs Plus Adds New Capabilities and Growth
- MCC To Be Introduced During F-16C/D Production Run

AM24655B

Mid-Life Update (MLU) Program

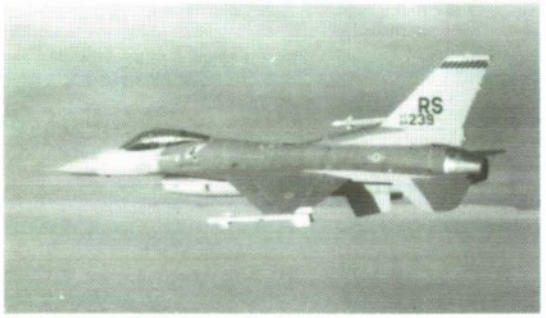


AC26732-1B

F-16C/D

AMC15637

The F-16C/D . . . Flown by Eight Air Forces Worldwide



United States Air Force

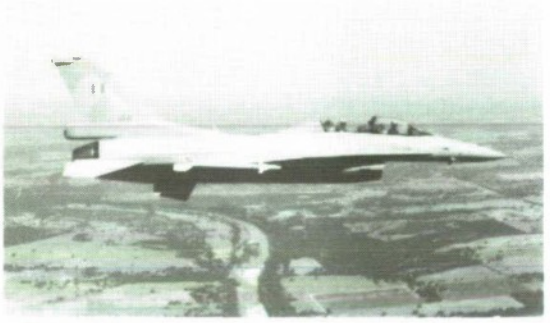
United States Navy

Israel

Egypt

Korea

Turkey



Greece

Bahrain

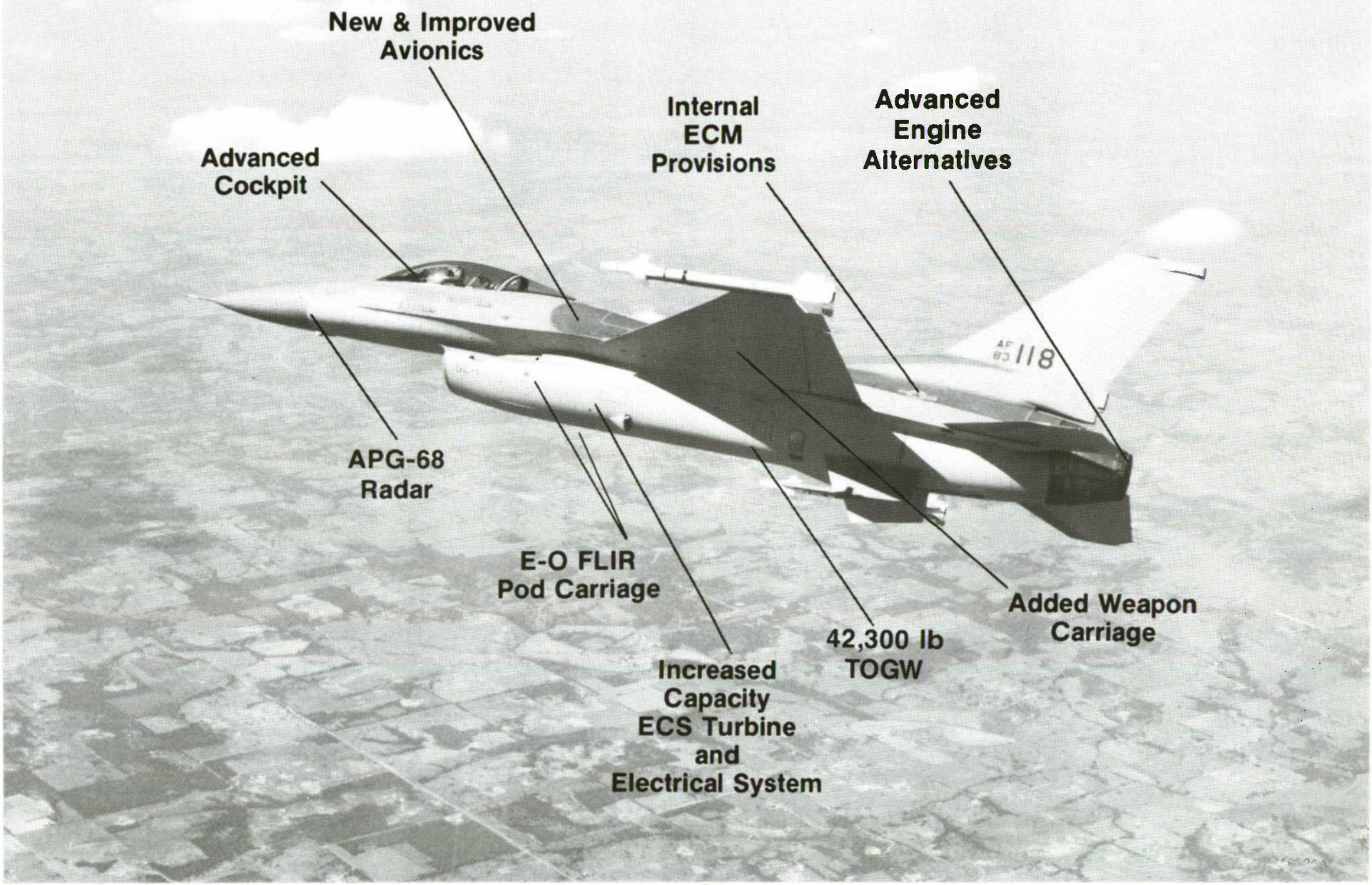
Total Committed Production ... 2,214

1 April 1993

AMC3502F

F-16C

- **F-16C Incorporates Latest Technology**
  - **— Provides Increased Tactical Capability**
  - **— Allows Incorporation of Emerging Weapons and Sensor Systems**

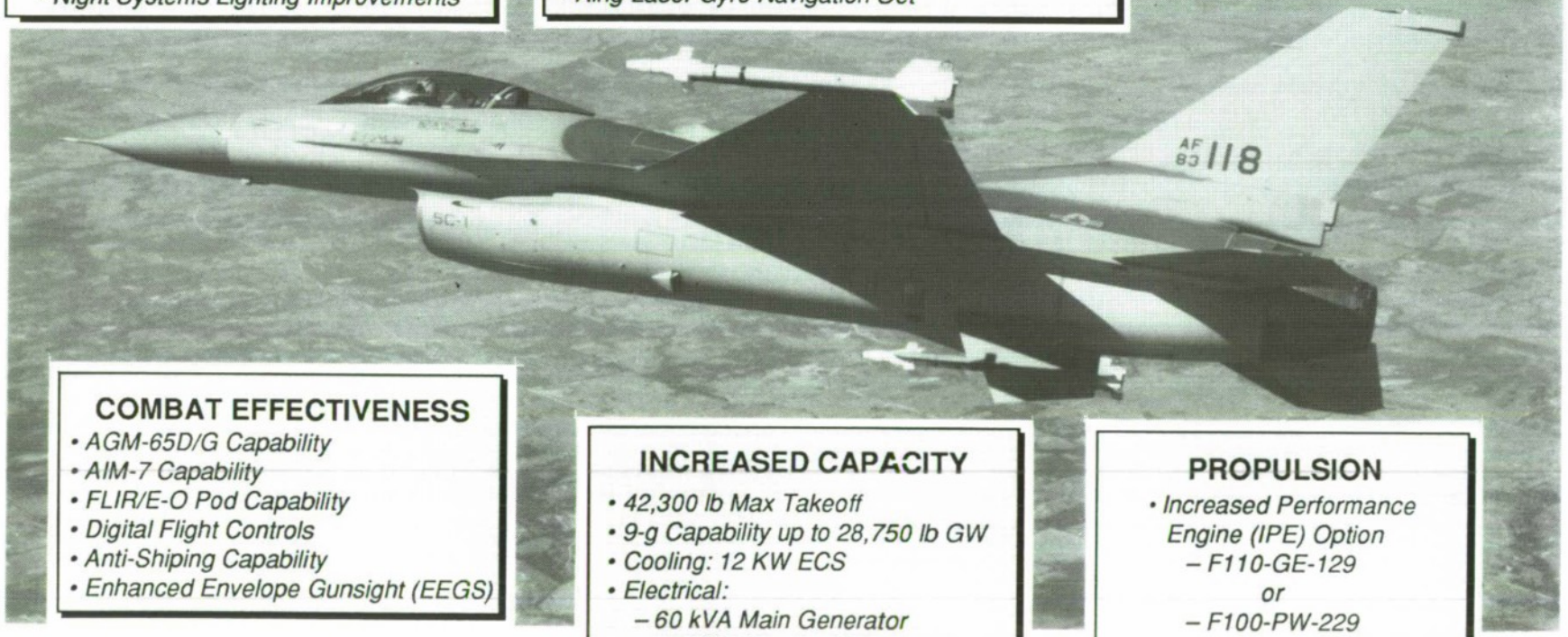


F-16C/D Current FMS Configuration

ADVANCED COCKPIT
- Up-Front Controls (CNI)
- Wide-Angle HUD
- Dual Multifunction Displays
- Mission Data Transfer Cartridge
- Voice Message Unit
- Pilot Fault List Display
- Positive Pressure Breathing System
- Night Systems Lighting Improvements

ADVANCED AVIONICS
- Improved Reliability Radar (APG-68V with APSP)
- 256K Fire Control Computer (GAC)
- Global Positioning System (GPS) Provisions
- Enhanced CIU
- Radar Altimeter (CARA)
- Advanced Interference Blanker Unit
- Enhanced XDEEU
- Expanded Data Transfer Unit (XDTU)
- Upgraded Programmable Display Generator
- Data Link (IDM) Provisions
- Ring Laser Gyro Navigation Set

SURVIVABILITY
- ALR-56M Advanced RWR
- ALE-47 Auto Dispensing Chaff/Flare
- Internal ECM Provisions
- Crash Survivable Flight Data Recorder (CSFDR)
- External ECM Capability



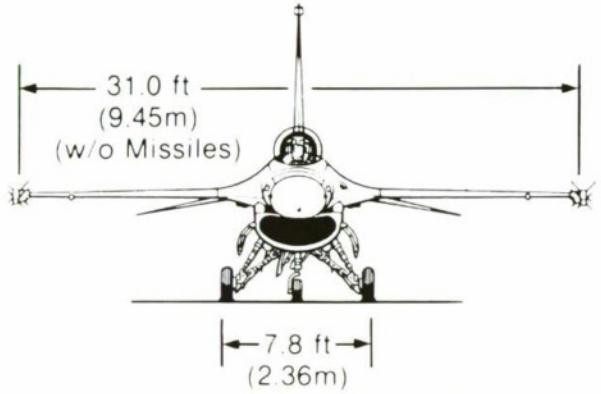
COMBAT EFFECTIVENESS
- AGM-65D/G Capability
- AIM-7 Capability
- FLIR/E-O Pod Capability
- Digital Flight Controls
- Anti-Shiping Capability
- Enhanced Envelope Gunsight (EEGS)

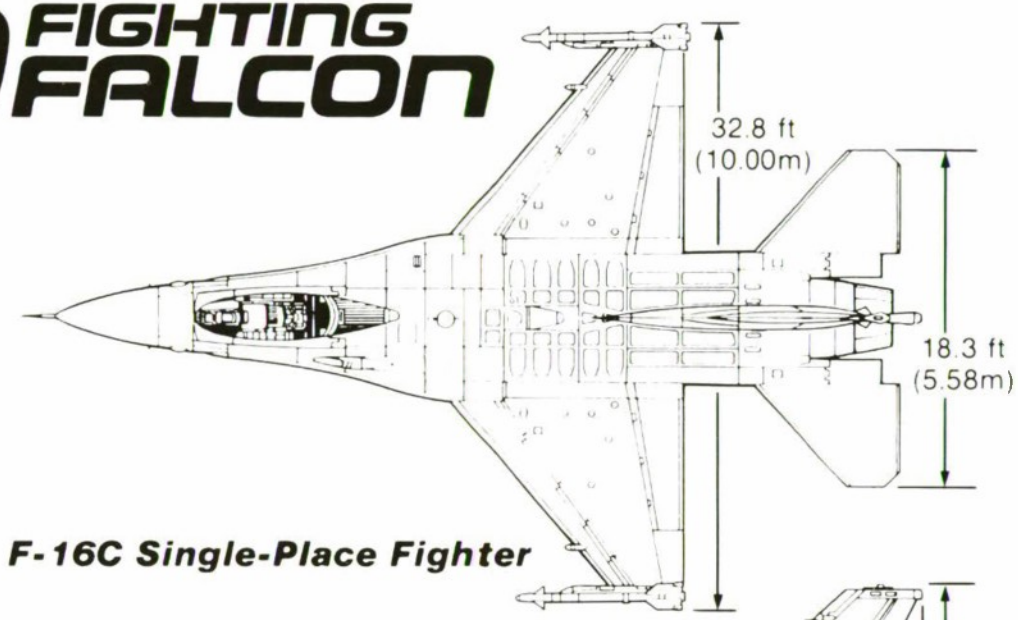
INCREASED CAPACITY
- 42,300 lb Max Takeoff
- 9-g Capability up to 28,750 lb GW
- Cooling: 12 KW ECS
- Electrical:
  - 60 kVA Main Generator
  - 10 kVA Standby Generator
  - 5 kVA Emergency Generator

PROPULSION
- Increased Performance Engine (IPE) Option
  - F110-GE-129
  - or
  - F100-PW-229

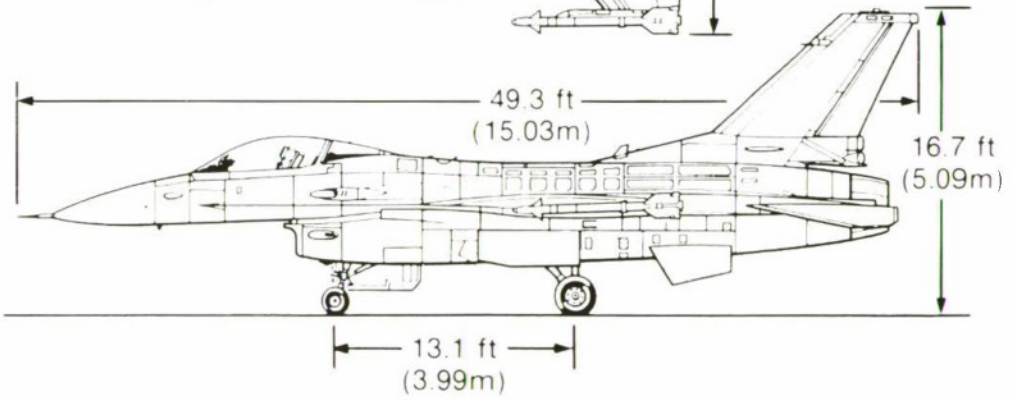
AMC4088

F-16C/D FIGHTING FALCON



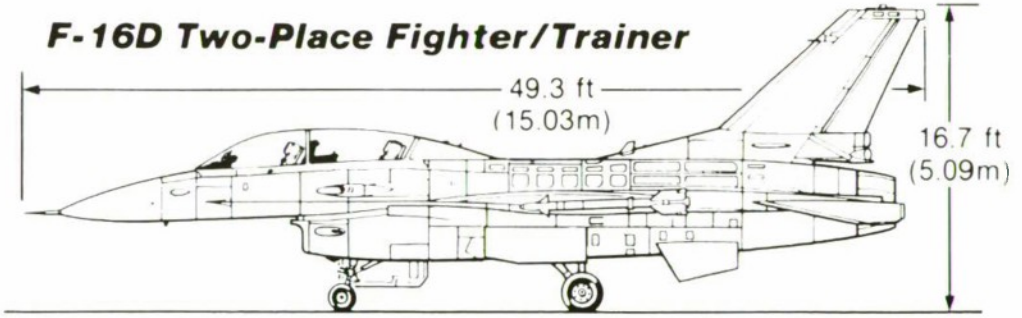


F-16C Single-Place Fighter



Characteristics		
Wing Area	300 sq ft	27.9 sq m
Aspect Ratio	3.0	3.0
Leading Edge Sweep	40°	40°
Weights:		
Empty* (F100-PW-229 Engine)	19,178 lb	8,699 Kg
Empty* (F110-GE-129 Engine)	19,517 lb	8,853 Kg
Internal Fuel	6,846 lb	3,104 Kg
Max TOGW	42,300 lb	19,184 Kg
Design Load Factor	9G	9G
Service Life	8,000 hr	8,000 hr
Engine Thrust:		
(F100-PW-229)	29,000 lb	129.0 kN
(F110-GE-129)	29,000 lb	129.0 kN

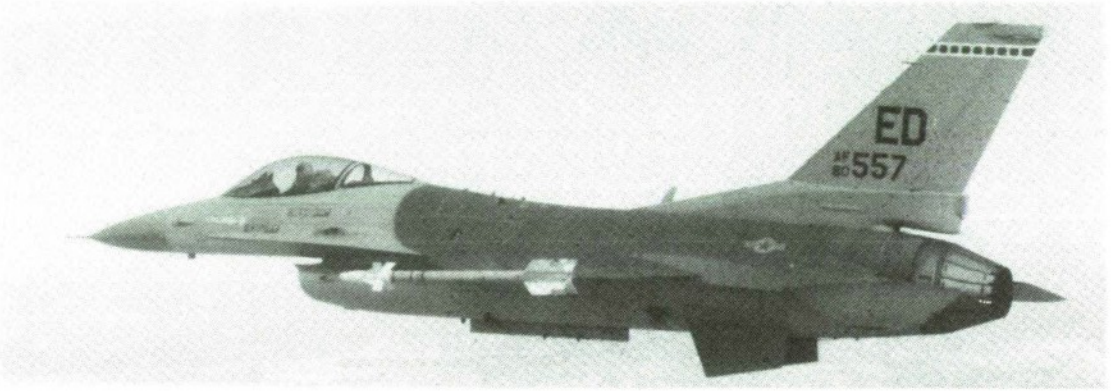
F-16D Two-Place Fighter/Trainer

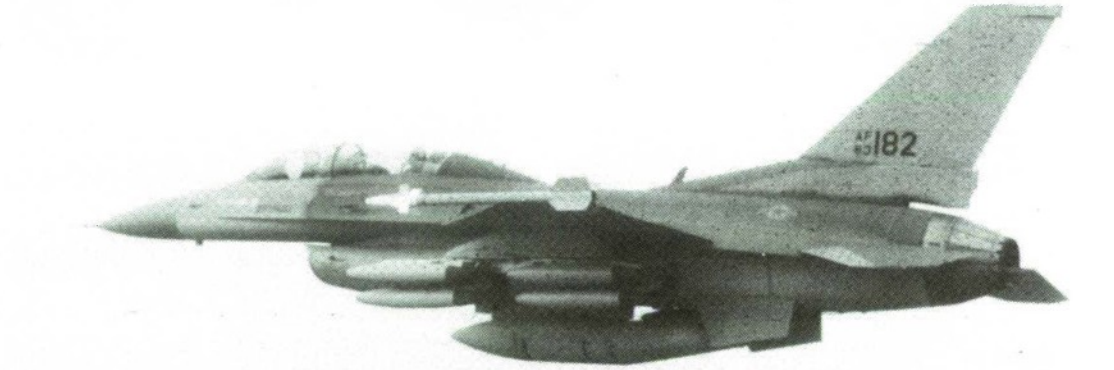


Characteristics		
Wing Area	300 sq ft	27.9 sq m
Aspect Ratio	3.0	3.0
Leading Edge Sweep	40°	40°
Weights:		
Empty (F100-PW-229 Engine)	19,182 lb	8,701 Kg
Empty (F110-GE-129 Engine)	19,531 lb	8,859 Kg
Internal Fuel	5,659 lb	2,566 Kg

AM26244

F-16 Two-Seat Fighter Trainer

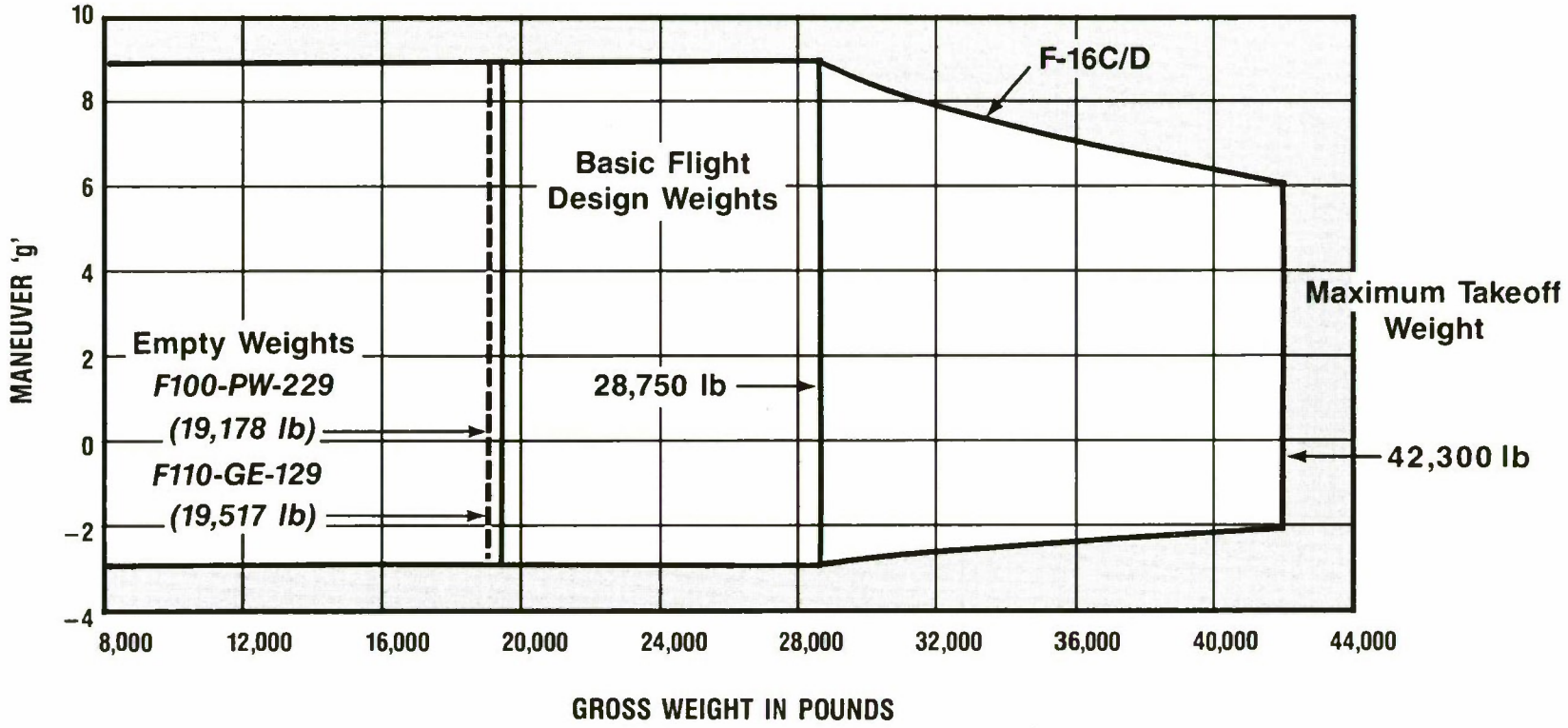




- Outstanding Trainer
  - — Same Systems as Single-Seat F-16
  - — Same Handling Qualities as Single-Seat F-16
  - — Same External Dimensions as Single-Seat F-16
- Full Multirole Capability with Single Pilot
- Second Seat Allows Enhanced Special Mission Operations

AM5428A

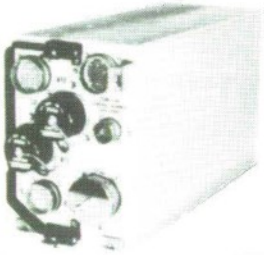
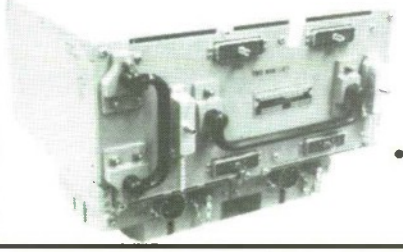
The F-16C/D Is a 9-g Fighter



- Capable of 9g with Full Internal Fuel and Missiles
- 8,000 Hour Design Service Life Goal

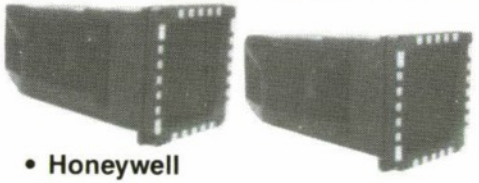
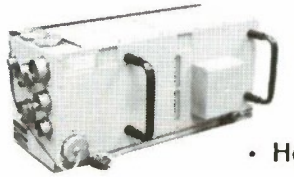
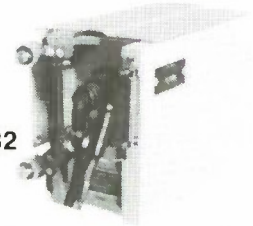
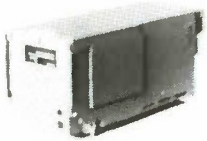
AM26245

F-16C/D Digital Avionic System Features

Fire Control Radar AN/APG-68(V5)		• Westinghouse	• EEPROM Memory • Situation Awareness Mode • Operational Upgrade • Improved Reliability • Advanced PSP
General Avionics Computer (GAC)		• Teledyne	• 256K Words Memory • 1.6 Million Instructions Per Second • 4 MIL-STD-1553 Buses • Reduced Weight, Volume, Power Consumption and Cost
Enhanced Central Interface Unit		• EFW	• Primary Bus Controller for Weapons Mux • Two MIL-STD-1553 Buses • Improved Throughput • Dual Redundant 176K Memory
Head-Up Display		• GEC of Great Britain	• Wide-Angle Field-of-View • Flight Information Cues • Weapons Delivery Cueing • Back-Up Fire Control Computations • Real-World FLIR Image (1 to 1)

AMC15428

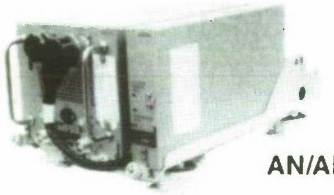
F-16C/D Digital Avionic System Features (Cont'd)

Two Multifunction Displays	 • Honeywell	• Weapons Inventory/Selection • Delivery Mode Selection/Control • Sensor Control/Display — Radar — TV — FLIR — Laser
Upgraded Programmable Display Generator (UPDG)	 • Honeywell	• Enhanced Memory and Throughput • Generates, Scales, Organizes, and Positions Multifunction Display (MFD) Symbology • Provisions for Digital Terrain System and Color
Radar Altimeter (CARA)	• Gould AN/APN-232 	• Optimized for Low Level Flight • Low-Altitude Warning Feature Enhances Safety
Inertial Navigation (RLG)	 • Honeywell H-423  • Litton LN-93	• Form/Fit/Function Replacement for Existing System • High Reliability • Two-Level Maintenance
Global Positioning System (GPS)	•Rockwell 	• Satellite-Based Navigation System • Precise, Low-Level Navigation and Weapon Delivery • Passive, All-Weather Operation

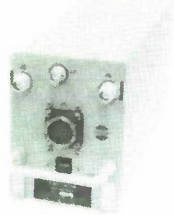
AMC8199

F-16C/D Digital Avionic System Features (Cont'd)

Radio Navigation



AN/ARN-108 ILS
• Collins

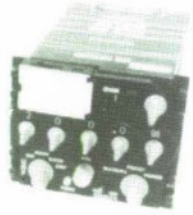


AN/ARN-118 TACAN
• Collins

- Enroute and Terminal Versatility
- All Weather Navigation and Recoveries

Communication

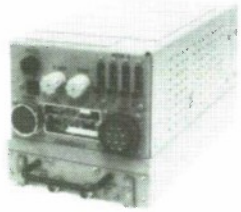
AN/ARC-164
UHF Radio
• Magnavox



AN/ARC-186 VHF
• Collins

- Tactical Flexibility
- Versatile Communications
- Improved Anti-Jam Capability
- Fully Integrated With Upfront Controls

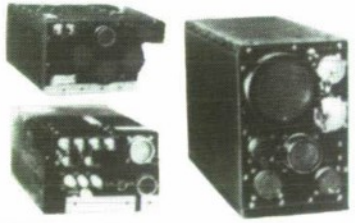
Identification (IFF)



AN/APX-101
• Teledyne

- Positive Identification
- Ground Control

Advanced Radar Warning Receiver

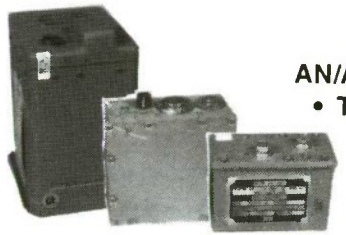
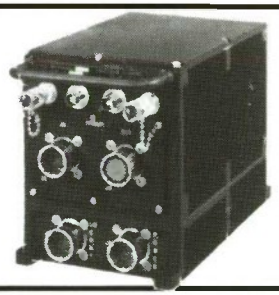
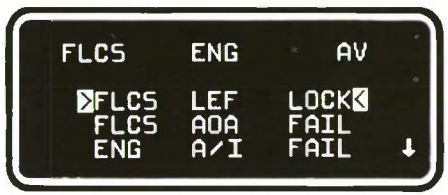
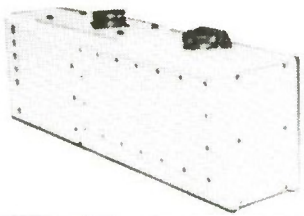


AN/ALR-56M
• Loral

- AAA, SAM & AI Responsive
- Programmable Threat Data
- Improved Identification and Prioritization

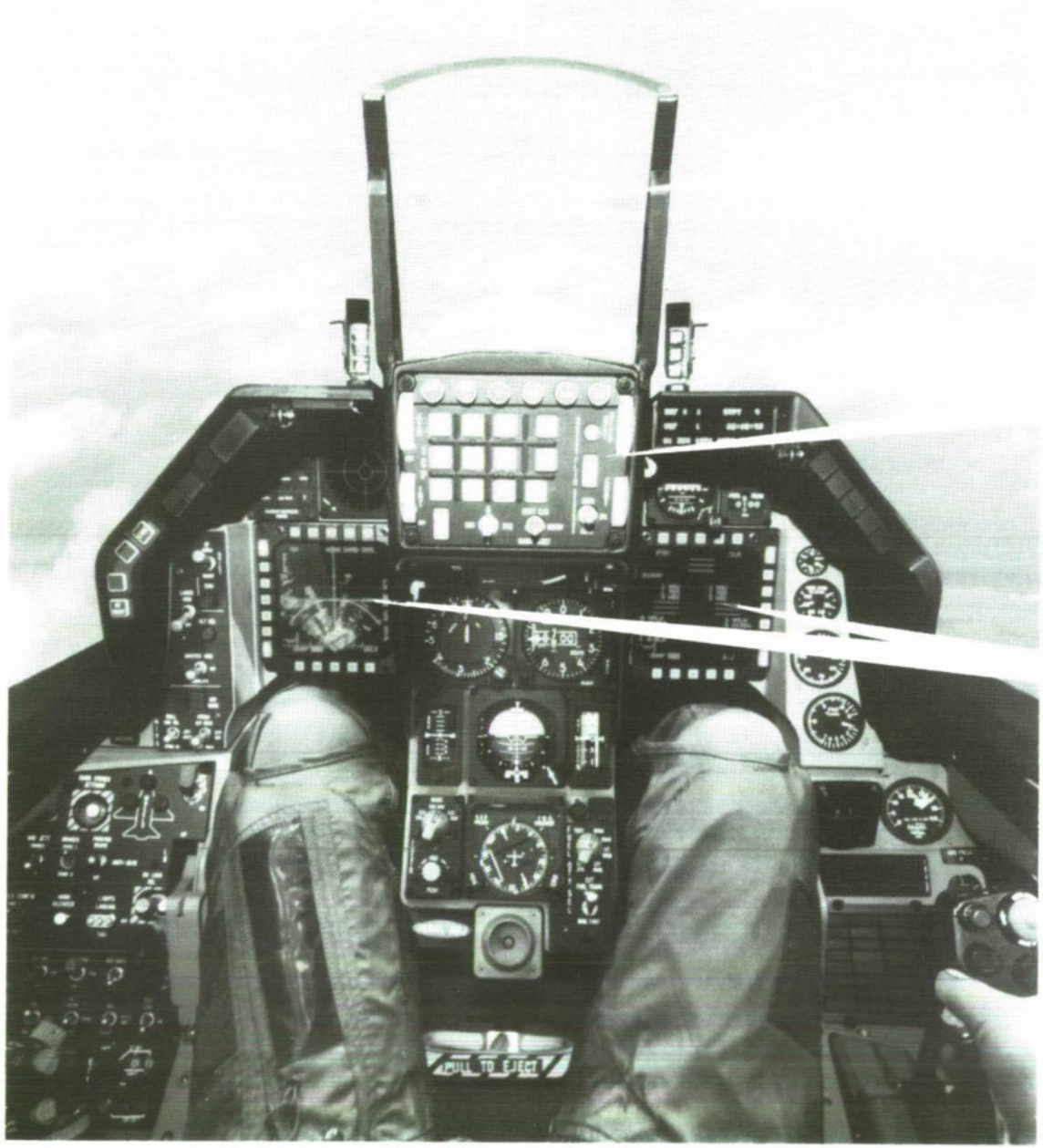
AM19251B

F-16C/D Digital Avionic System Features (Cont'd)

Chaff/Flare Countermeasures	 AN/ALE-47 • Tracor	• Radar and IR Countermeasures • Increased Dispense Capacity • Interfaces with ARWR
Data Link	Improved Data Modem (IDM) 	• Command and Control • Transmission or Reception via Existing Radios • First Use: HARM/Shrike Launch Coordination
Pilot Fault List Display	 • Litton of Canada	• Dedicated Display for Flight Critical Systems: Digital Flight Controls, Engine, Avionics • Displays Faults Automatically
HARM/Shrike III	 Aircraft Launcher Interface Computer ALIC • Texas Instruments	• Interface Between F-16 and HARM/Shrike Missiles • Extends Delivery Envelope by Providing Missiles with Aircraft Velocity, Position, etc.

AM19252B

Multirole Cockpit



Head-Up Display

- Flight Data
- Weapons Release
- Night Navigation

Upfront Control

- Communication
- Navigation
- Identification

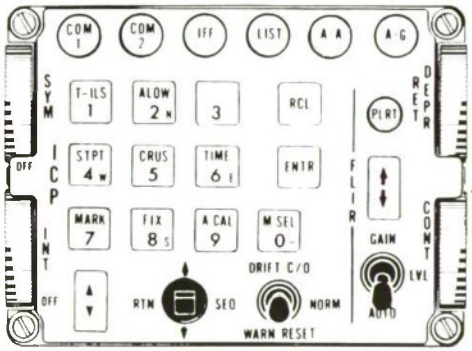
Multifunction Displays

- Weapons Control
  - Inventory
  - Weapon Selection
  - Delivery Mode Selection
- Sensor Control
  - Radar
  - FLIR
  - TV

AM26788

Upfront Communications, Navigation, Identification System Controls and Displays

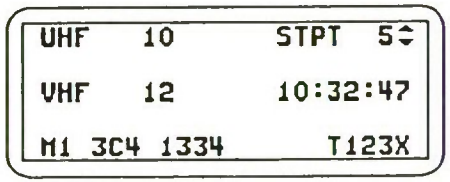
Easy Access - Finger Tip Data Entry and Control



Integrated Control Panel

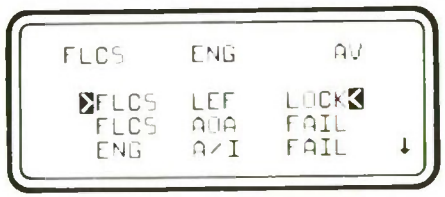
Either-Hand Access

- Comm/Nav - Radios
- IFF
- Data Keyboard
- Delivery Modes
- Nav FLIR Controls



Data Entry Display

- Radios - Freq/Chan
- IFF - Modes/Codes
- Nav Steerpoints
- Keyboard Display
- Fire Control Data Management



Pilot's Fault List Display

- Dedicated Display for Flight Critical Systems
  - — Digital Flight Controls
  - — Engine
  - — Avionics
- Displays Faults Automatically

Features

- Integrated Controls and Displays Located in Pilots Forward Peripheral Vision
- Programmable System with 32K Addressable Memory
- Back-Up Controls for Critical Functions

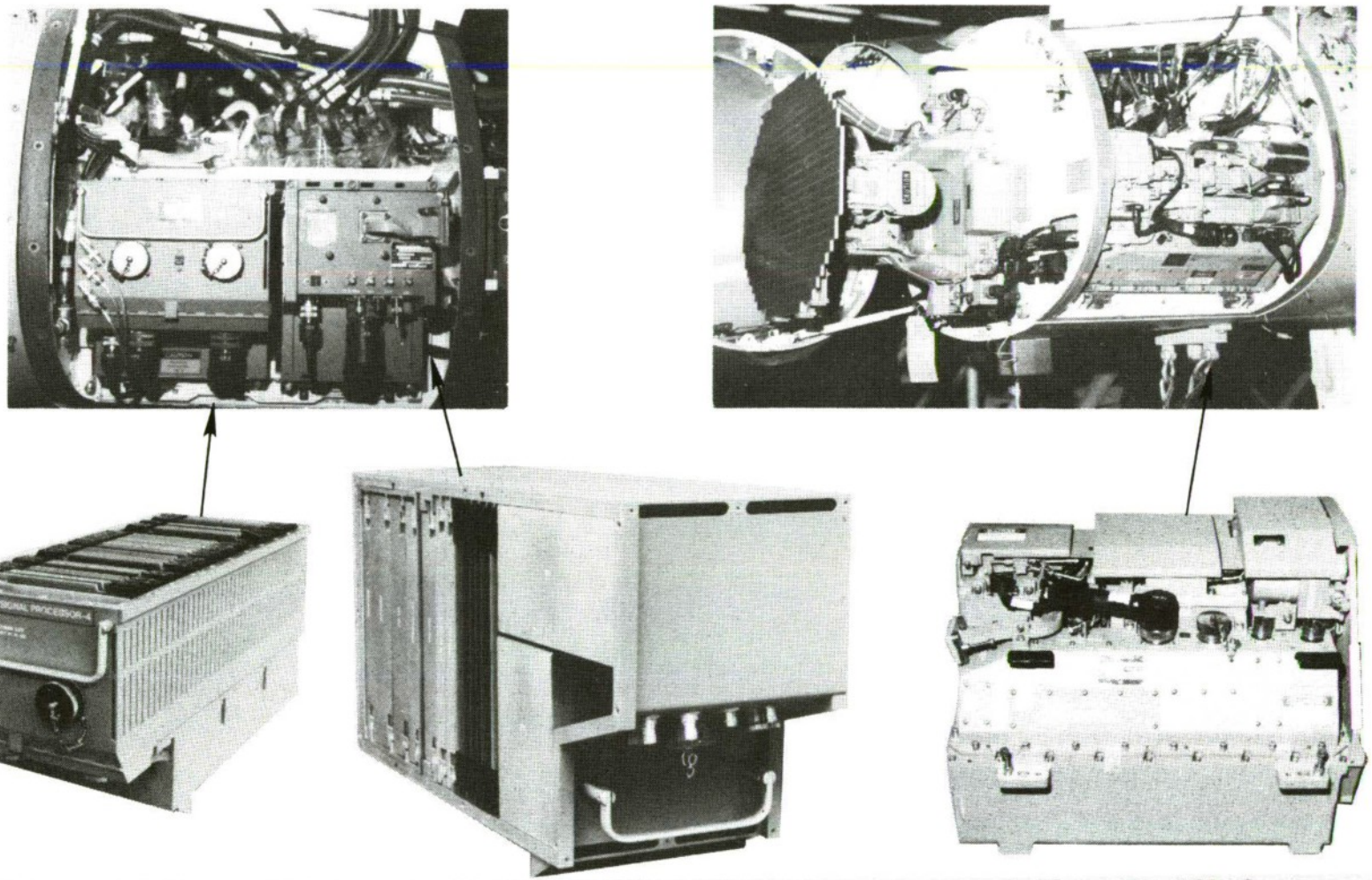
AM20076A

Multifunction Displays

- Primary Interface Between Pilot and Weapons or Sensors
- Independent Displays for Weapons or Sensors Control
- Coordinated Flight and Sensor Cueing
- Multiple Video and Text Sources
  - Fire Control Radar
  - Weapons
  - Targeting Pod
  - Navigation FLIR
  - Test
  - Fire Control Computer
  - Stores Management Set
  - Data Transfer Unit
  - Digital Flight Controls

AMC3376

F-16C AN/APG-68 Radar



Programmable Signal Processor (PSP)

Modular LPRF

Dual Mode Transmitter (DMT)

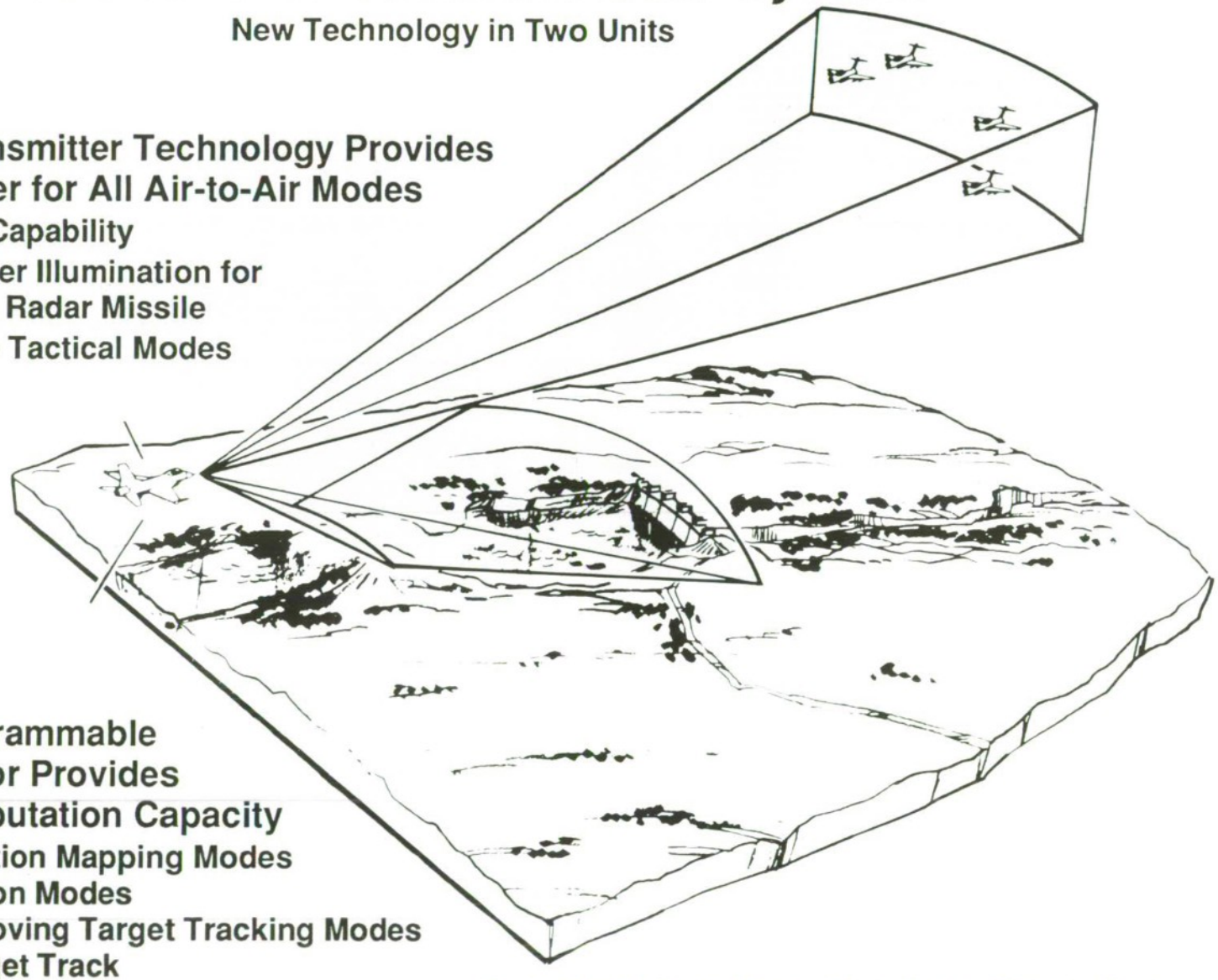
AM5436B

F-16C APG-68 Tactical Radar System

New Technology in Two Units

Dual Mode Transmitter Technology Provides Increased Power for All Air-to-Air Modes

- Multitarget Capability
- Pulse Doppler Illumination for Semi-Active Radar Missile
- Long-Range Tactical Modes



Advanced Programmable Signal Processor Provides Increased Computation Capacity

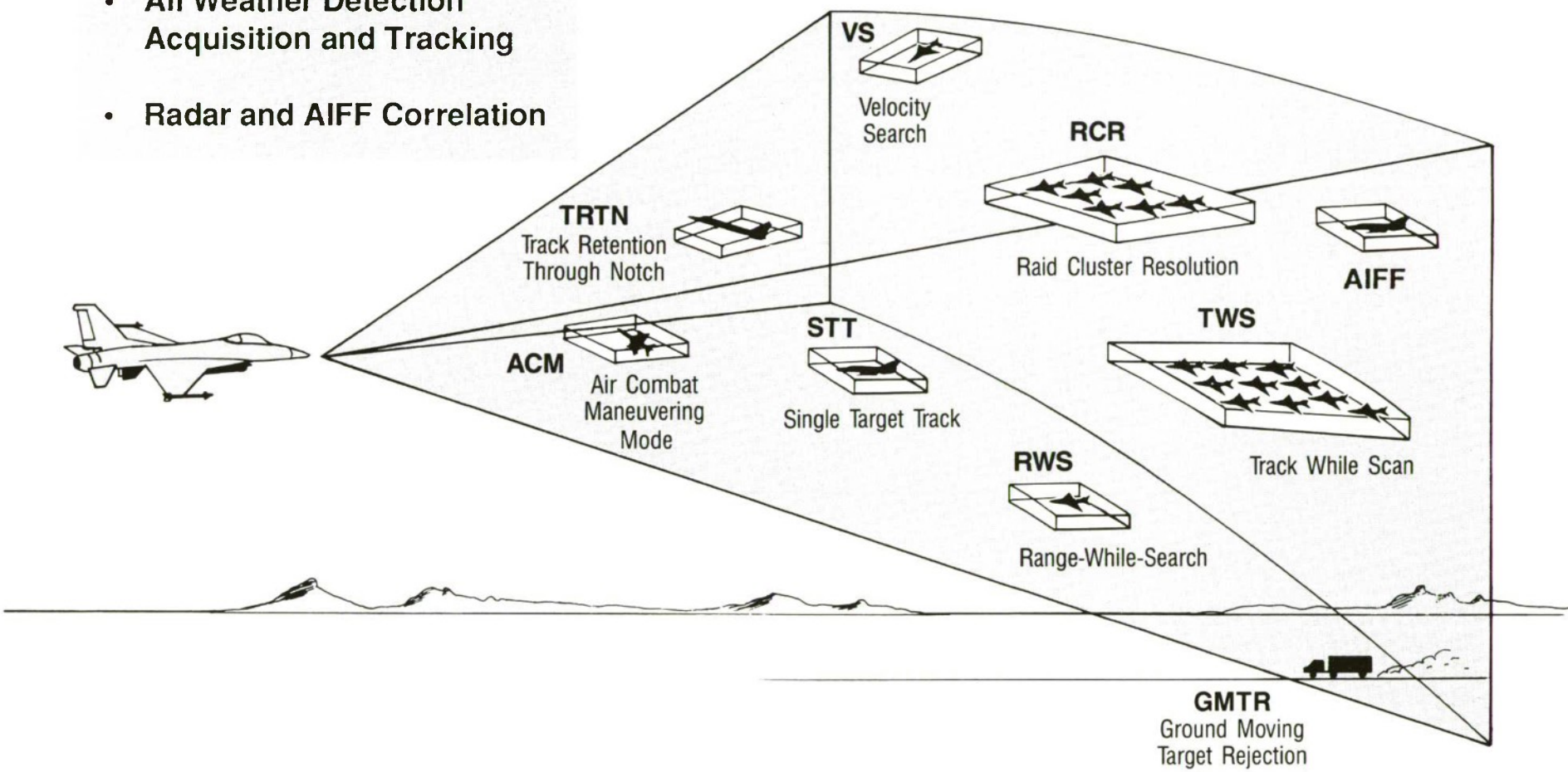
- High Resolution Mapping Modes
- Ship Detection Modes
- Fixed and Moving Target Tracking Modes
- Multiple Target Track
- Growth Capability

Automated for Easy One-Man Operation

AMC2721

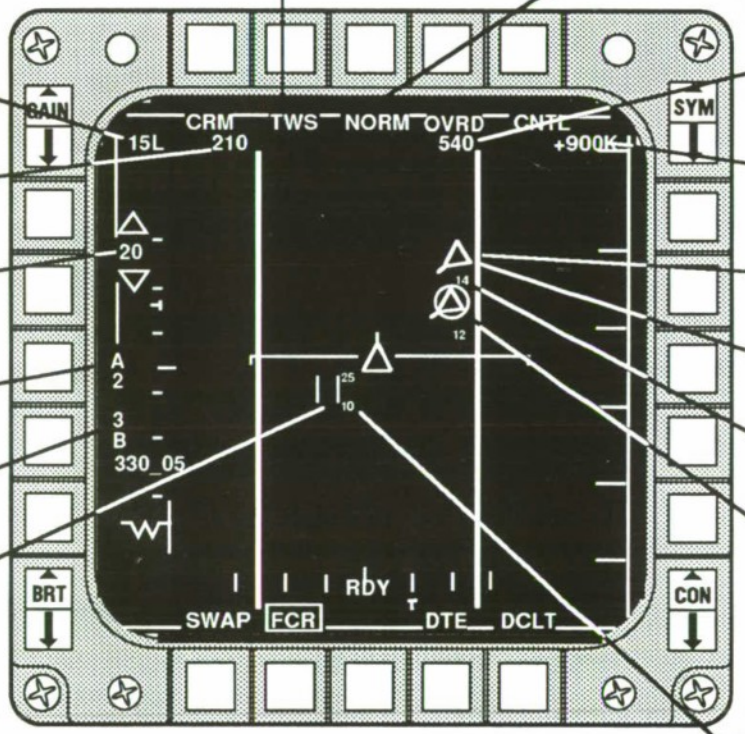
F-16C Radar Provides Multimode Air-to-Air Capabilities

- All Weather Detection Acquisition and Tracking
- Radar and AIFF Correlation



AM3804C

Air-to-Air Track-While-Scan Radar Display



Radar Mode

Field-of-View Option (Norm/Exp)

Aspect Angle (Deg x 10) for Bugged Target

Groundtrack for Bugged Target

Radar Range

Antenna Azimuth Scan

Elevation Bar Scan

Radar Cursor

Calibrated Airspeed (Knots) for Bugged Target

Closure Rate for Bugged Target

Target Speed/ Direction Indicator

Target Symbol

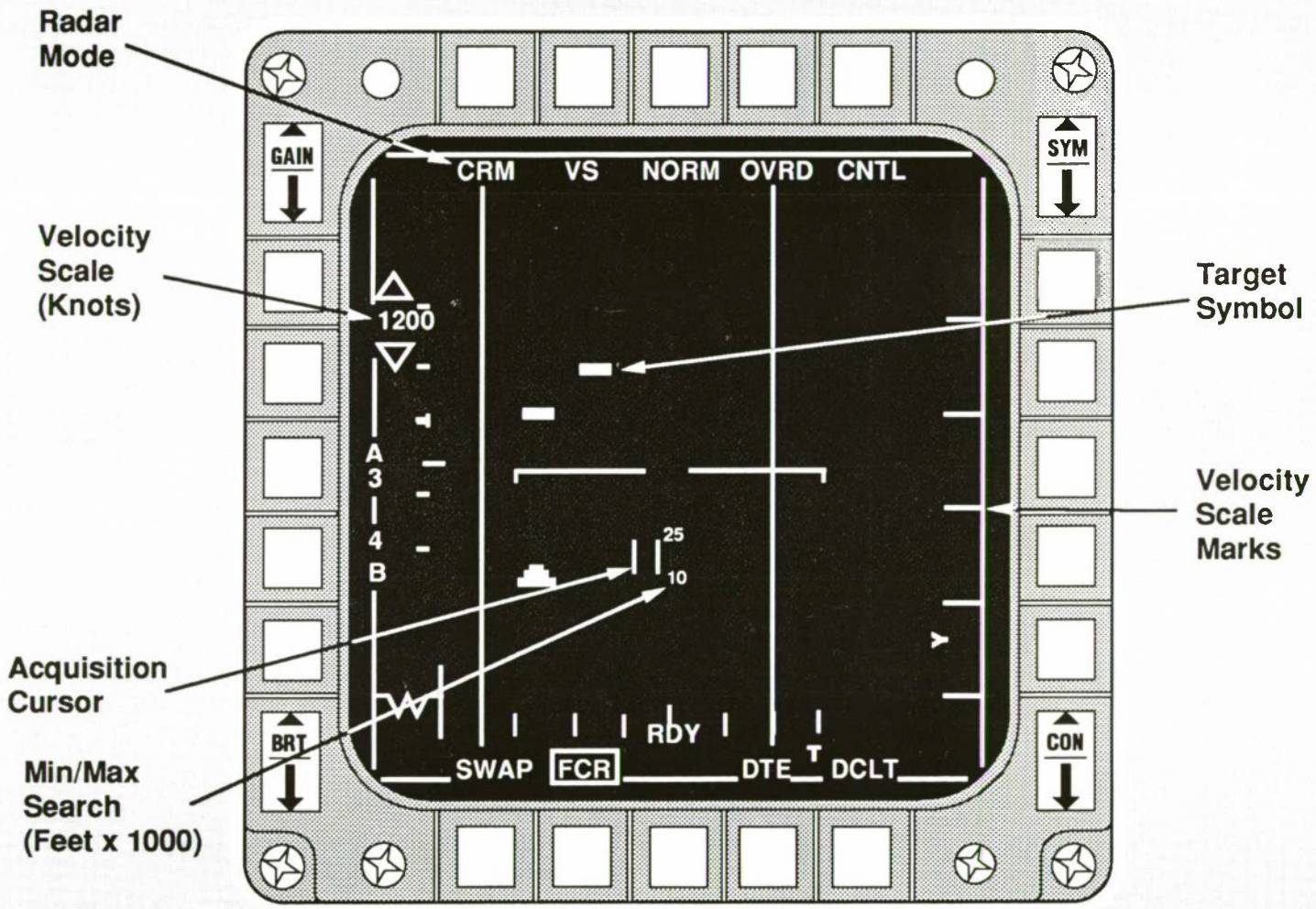
Target Altitude (ft x 1000)

Bugged Target

Min/Max Search Altitudes at Cursor Range (ft x 1000)

AMC3386A

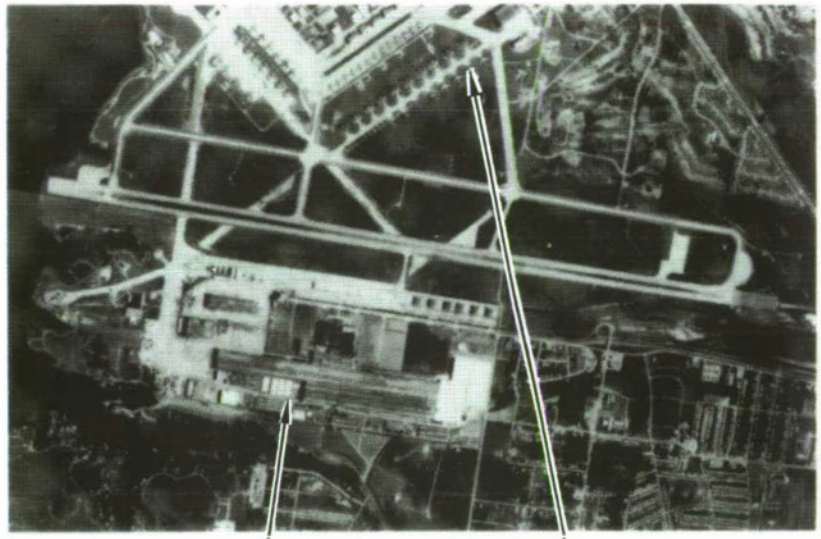
Air-to-Air Velocity Search Display



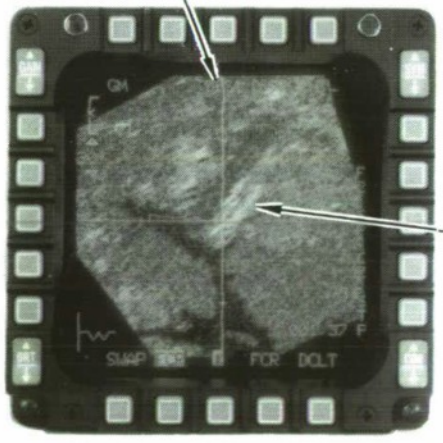
AMC4107

Improvement in Radar Resolution and Displays Enhance Precise Navigation, Target Identification and Weapons Delivery

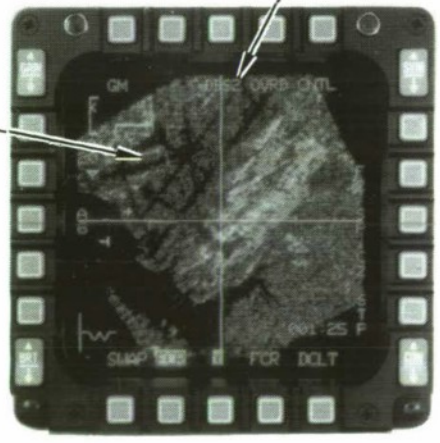
Photograph



DBS-1



DBS-2



Runways and Parked Aircraft

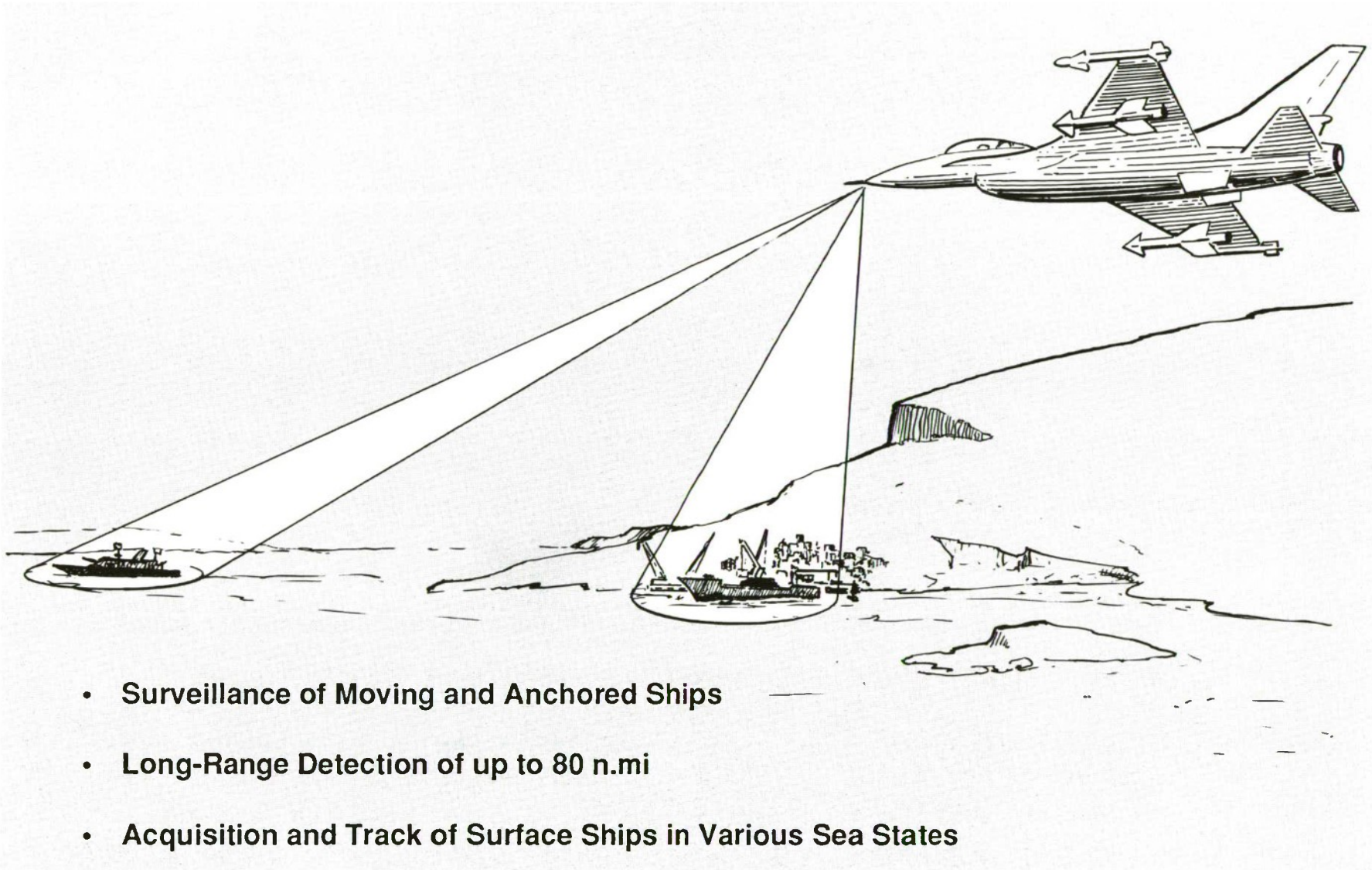
Factory Complex

8:1 Doppler Beam Sharpening

64:1 Doppler Beam Sharpening

AM5549A

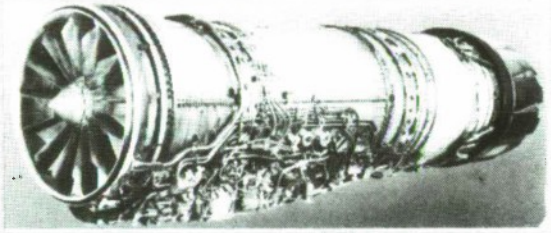
Sea Mode Provides Long-Range Surveillance of Sea Lanes



- Surveillance of Moving and Anchored Ships
- Long-Range Detection of up to 80 n.mi
- Acquisition and Track of Surface Ships in Various Sea States

AM836-B

Increased Performance Engines (IPE)

Engine Characteristics (Sea Level Static, Uninstalled)	**F110-GE-129 Option** 	**F100-PW-229 Option** 
Maximum Thrust (SLS)*	**29,588 lb**	**29,100 lb**
Intermediate Thrust (SLS)*	**17,752 lb**	**17,800 lb**
Airflow	**265 pps**	**248 pps**
Thrust/Weight	**7.4**	**7.8**
By-Pass Ratio	**0.77**	**0.33**
Pressure Ratio	**30.7**	**33.6**
Weight (lb)	**3,980**	**3,740**
Length (in.)	**182.3**	**191.2**
Diameter	**46.5**	**46.5**

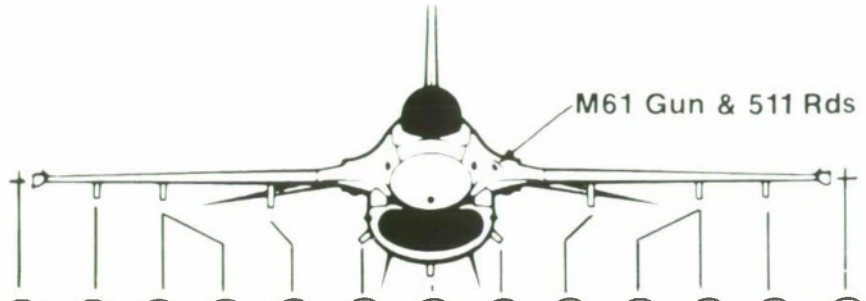
* *Average Specification Thrust (as of 7 August 1991)*

Thrust Increase with Operability, Reliability, Maintainability and Safety Benefits Retained

AMC4091A

AM26246

F-16 Weapons Carriage Capability



	Station Stores	9	8	7	7A	6	5R	5	5L	4	3A	3	2	1
Air-to-Air Weapons	AIM-9 Missiles	✕	✕		✕						✕		✕	✕
	Advanced BVR Missiles	✕	✕		✕						✕		✕	✕
	BVR Missiles			✕								✕		
Pods	ECM			●				●				●		
	EO/FLIR/TF (Provisions)						●		●					
	Recce (Growth)							●						
	30mm Gun Pod (Growth)							◎						
Air-to-Surface Weapons	MK-82			●		●				●		●		
	MK-84			●		●				●		●		
	Dispensers			●		●				●		●		
	Air-to-Surface Missiles			●								●		
	Anti-Radiation Missiles			●								●		
	Anti-Shipping Missiles			✕		✕				✕		✕		
Fuel Tanks	370-Gallon					○				○				
	300-Gallon							○						
	600-Gallon (Option)					○				○				
STATION CAPACITY	Capacity (lb)	425	700	3500	450	4500	550	2200	550	4500	450	3500	700	425
	Load Factor (g)	9.0	5.5	5.5	9.0	5.5	9.0	5.5	9.0	5.5	9.0	5.5	5.5	9.0
	Alternate Cap. at 9g	425	450	2000	450	2500	550	1200	550	2500	450	2000	450	425

AMC2524C

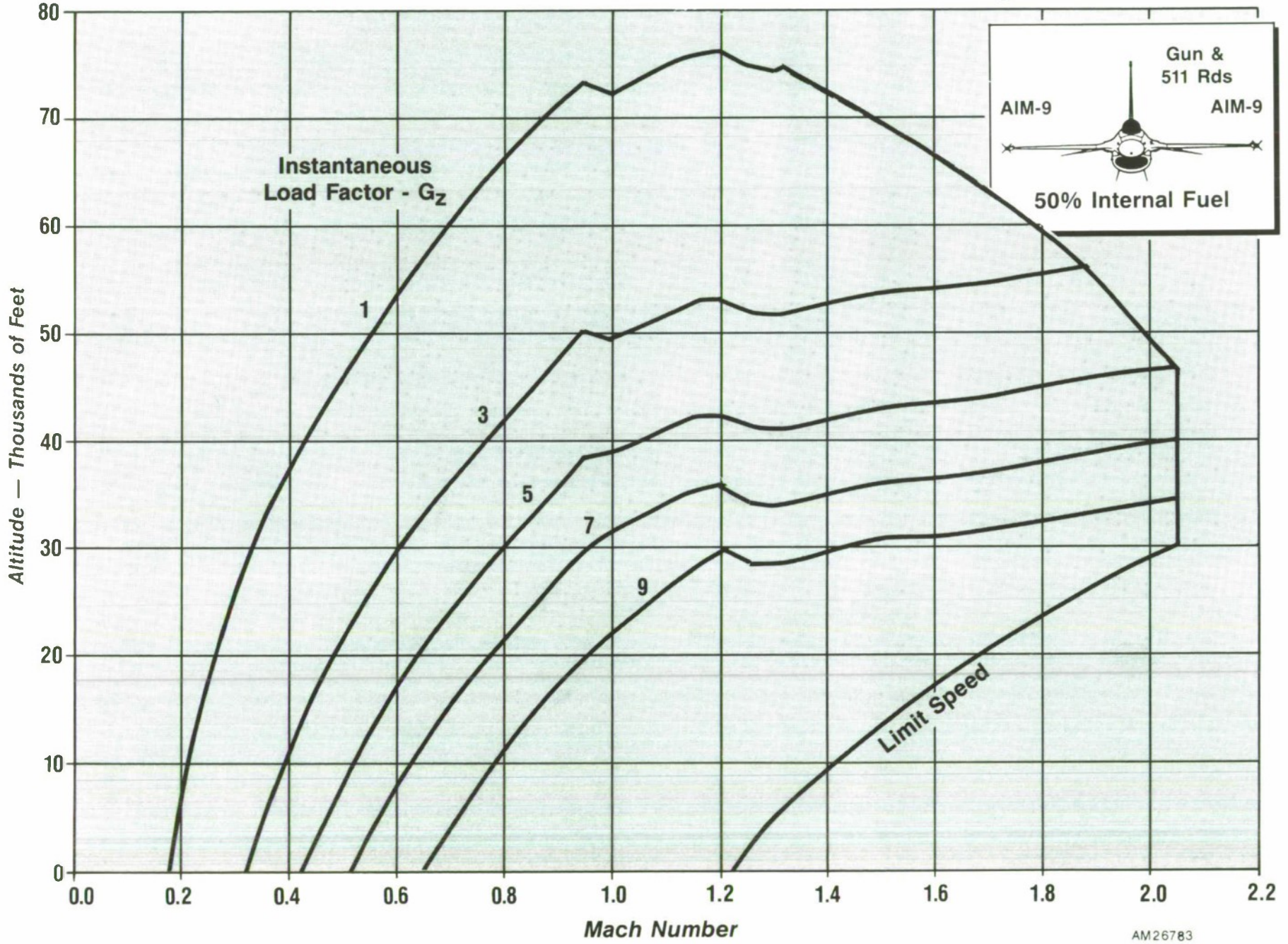
F-16 AMRAAM

F-16/AMRAAM Development Phase Completed in January 1989

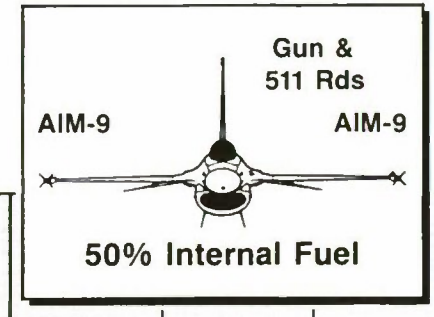
- F-16 Flight Test
  - 2 Unguided Launches
  - 30 Guided Launches Against Maneuvering Drones
    - 10 Direct Hits; 15 Lethal Range Hits; 5 Misses
    - Includes Multitarget Dual Launch Attacks With Jamming
- 6 Missile Capability
- Production and Retrofit on F-16s
  - F-16A Air Defense Fighter
  - F-16C Block 30/40/50
- First Two AMRAAM Kills Accomplished by F-16 Aircraft

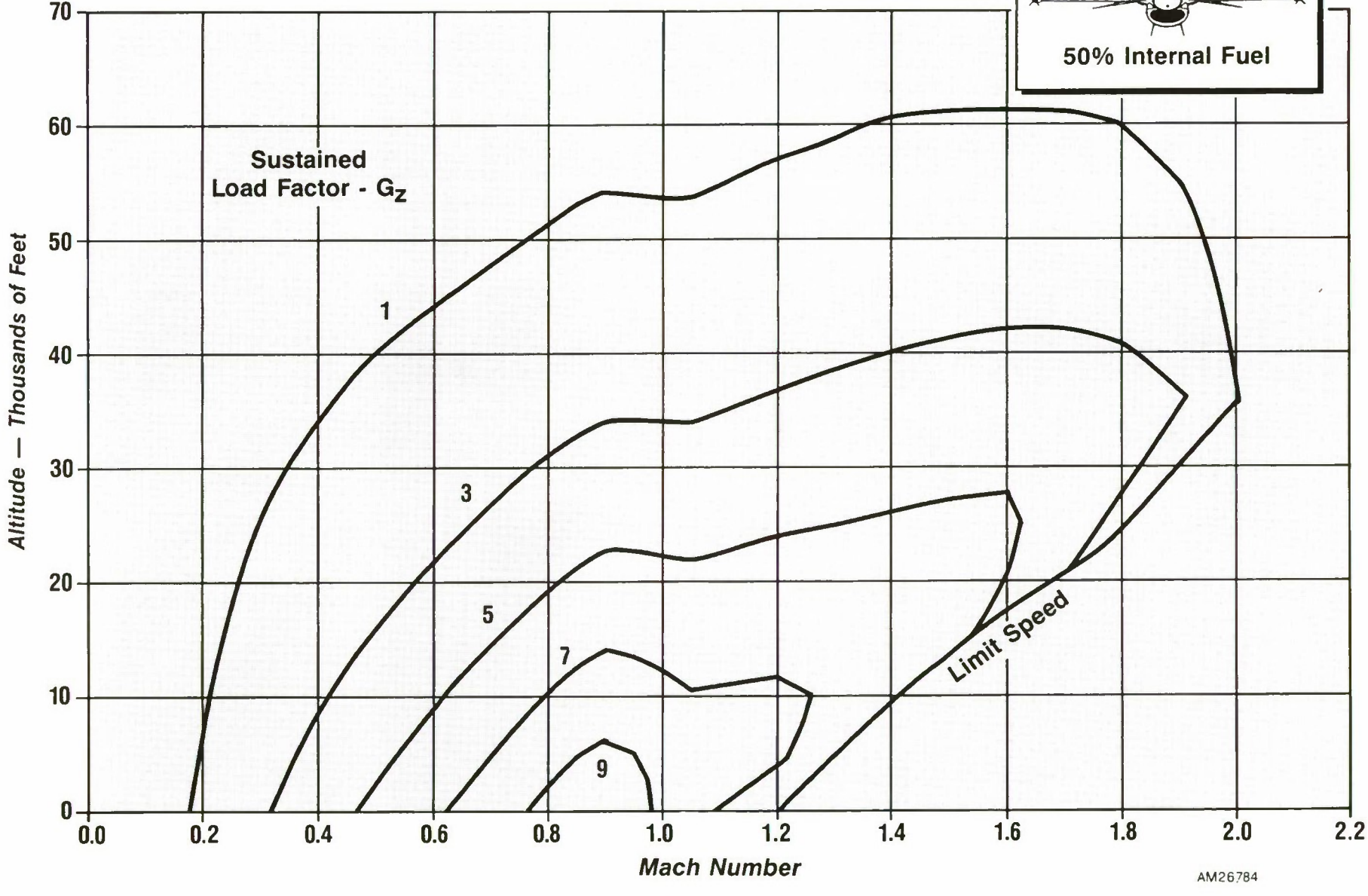
AMC15261

F-16C Instantaneous Maneuverability



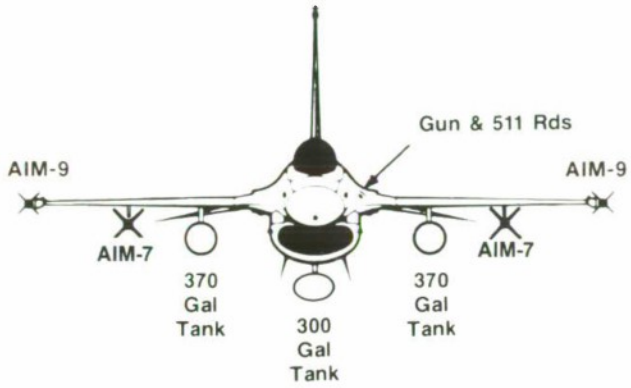
F-16C Sustained Maneuverability



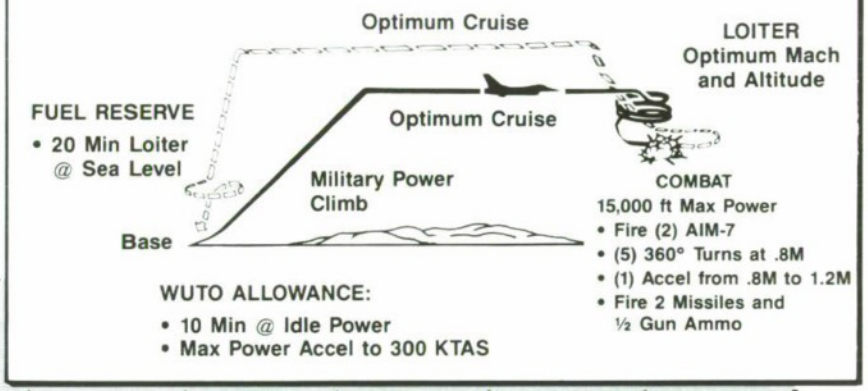


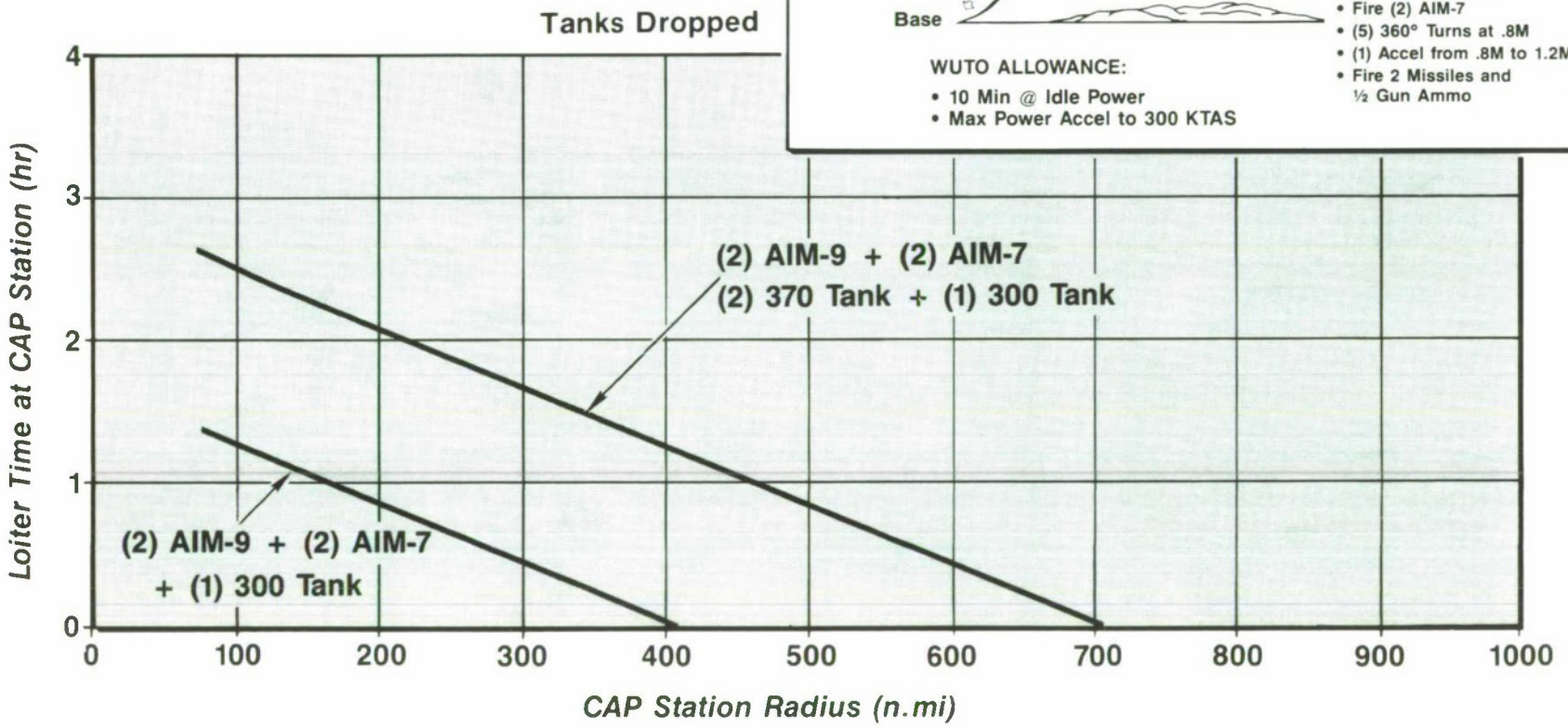
AM26784

F-16C Air-to-Air Combat with Loiter



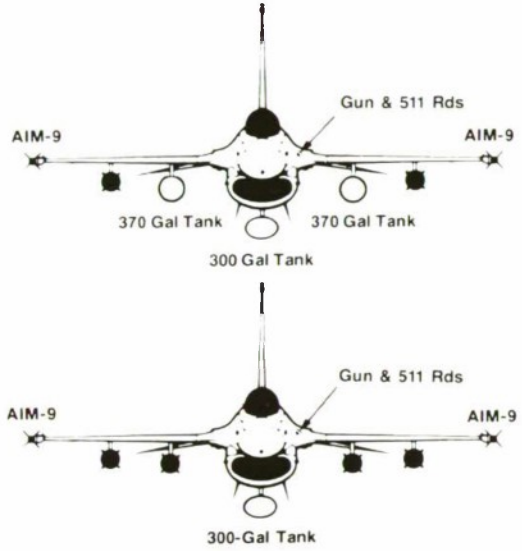
Mission Profile



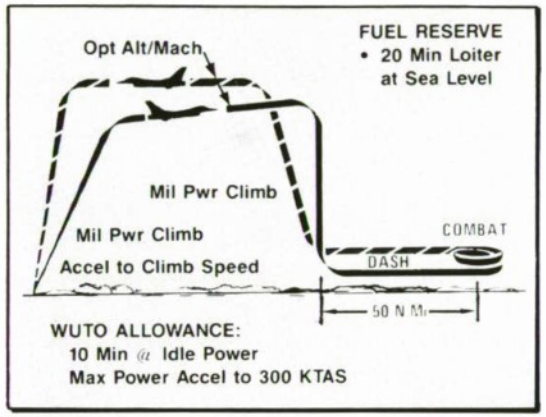


AM24654A

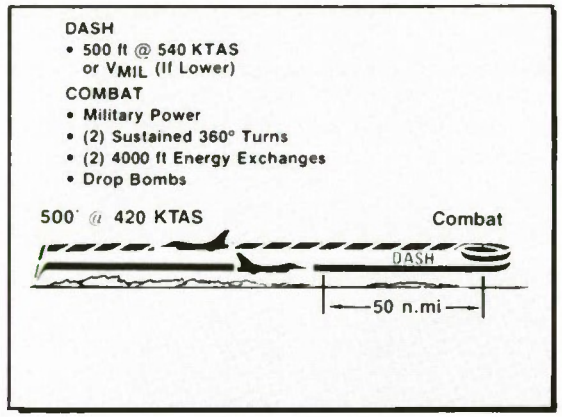
F-16C Air-to-Ground Mission



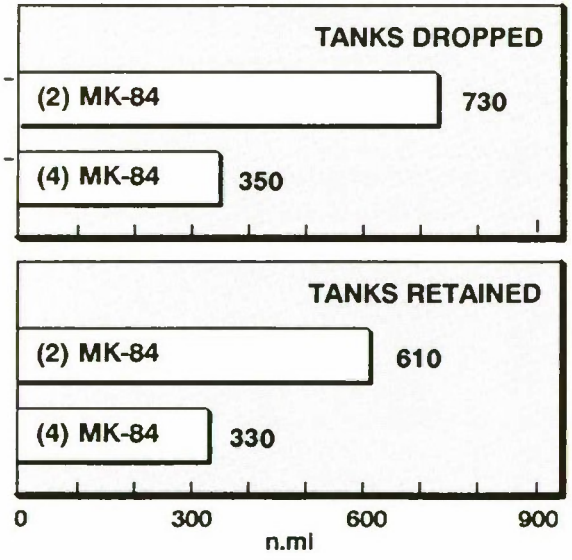
Hi-Lo-Lo-Hi



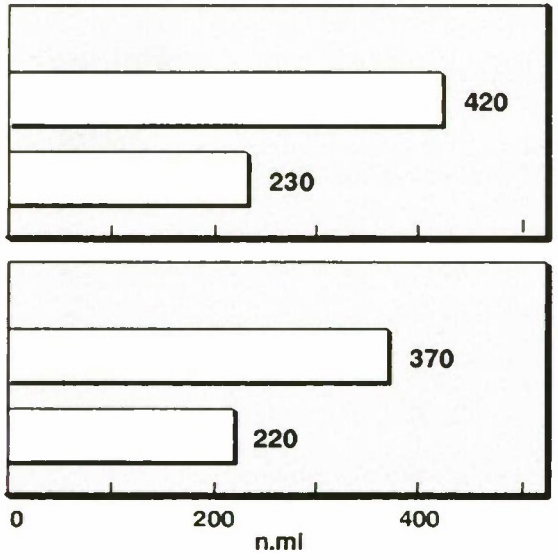
Lo-Lo-Lo-Lo



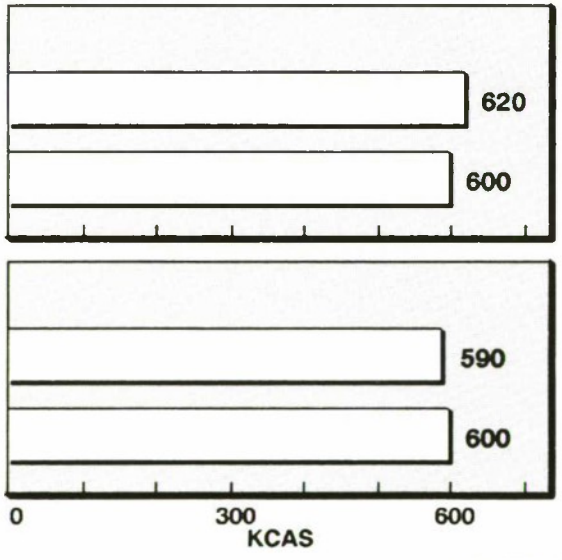
Mission Radius Hi-Lo-Lo-Hi



Mission Radius Lo-Lo-Lo-Lo



Ingress Speed Potential – Military Power



ACA0471-1A

F-16C Summary

- F-16C Production and Deployment Through the 1990s
- Highest Mission Readiness of Any USAF Fighter
- New Standards of Reliability and Maintainability
- New Capabilities
  - Night Low-Level Attack
  - Improved Weapon Delivery Accuracy
  - BVR Missiles
  - Integrated Electronic Warfare Suite
  - Automated Expendables Management

AM4988D

Supportability

AMC15638

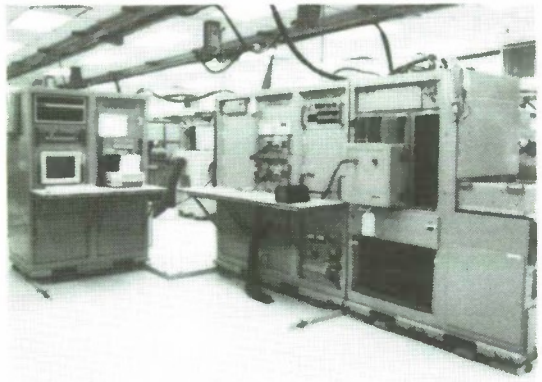
F-16 Maintenance Concept

Organizational Maintenance

- Inspections
- Servicing
- Loading
- Isolate Faults to LRU
- Remove and Replace Failed LRU

Intermediate Maintenance

- Inspections
- Aircraft Heavy Maintenance
- Test LRU/Isolate Fault to SRU
- Remove and Replace Failed SRU
- Calibration



Depot Maintenance

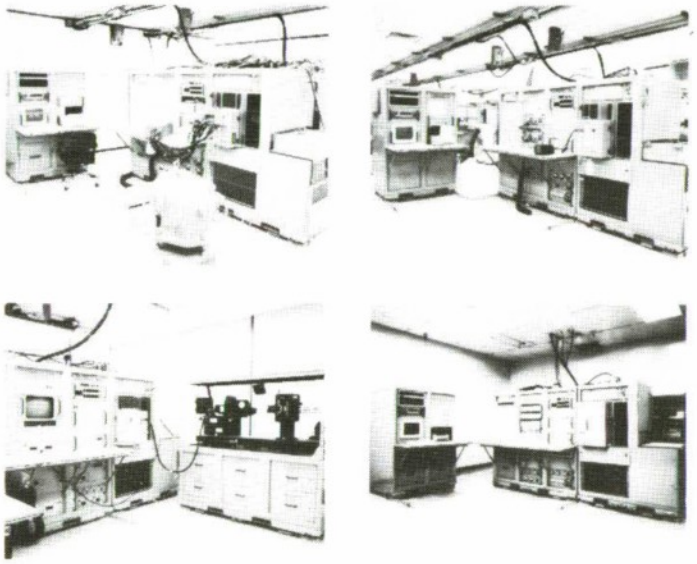
- No Programmed Depot Maintenance for the Aircraft
- When Necessary,
  - Major Structural Repair
  - Repair Failed SRU
  - Software Support

AMC8328

USAF Going to Improved AIS (IAIS)

TODAY

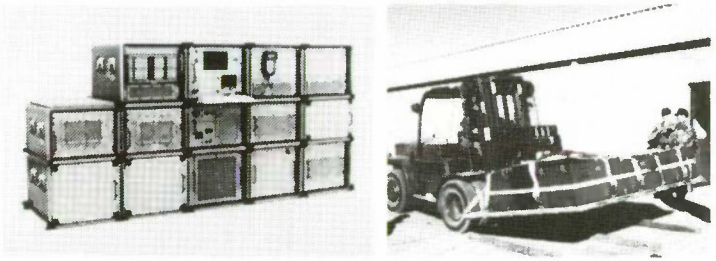
PRESENT AIS



- Four Full Sized Stations Capable of Testing 47 C/D LRUs
- Requires Special Facilities
- Requires Several C-130s for Airlift
- Minimum MTBF of 125 Hours for Each Station

FUTURE

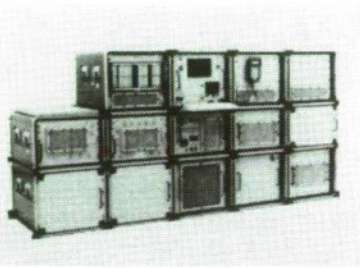
IMPROVED AIS



- One Down-Sized Test Station with Accessory Optics Bench
- Tests 22 LRUs — AF Assigning Other F-16 LRUs to Depot Only Maintenance
- Operates on Any Available Power (47-440 Hz)
- No Special Facilities Required
- Can Be Airlifted on One Cargo Pallet
- Minimum MTBF of 400 Hours

AMC9152

Improved Avionics Intermediate Shop (IAIS)

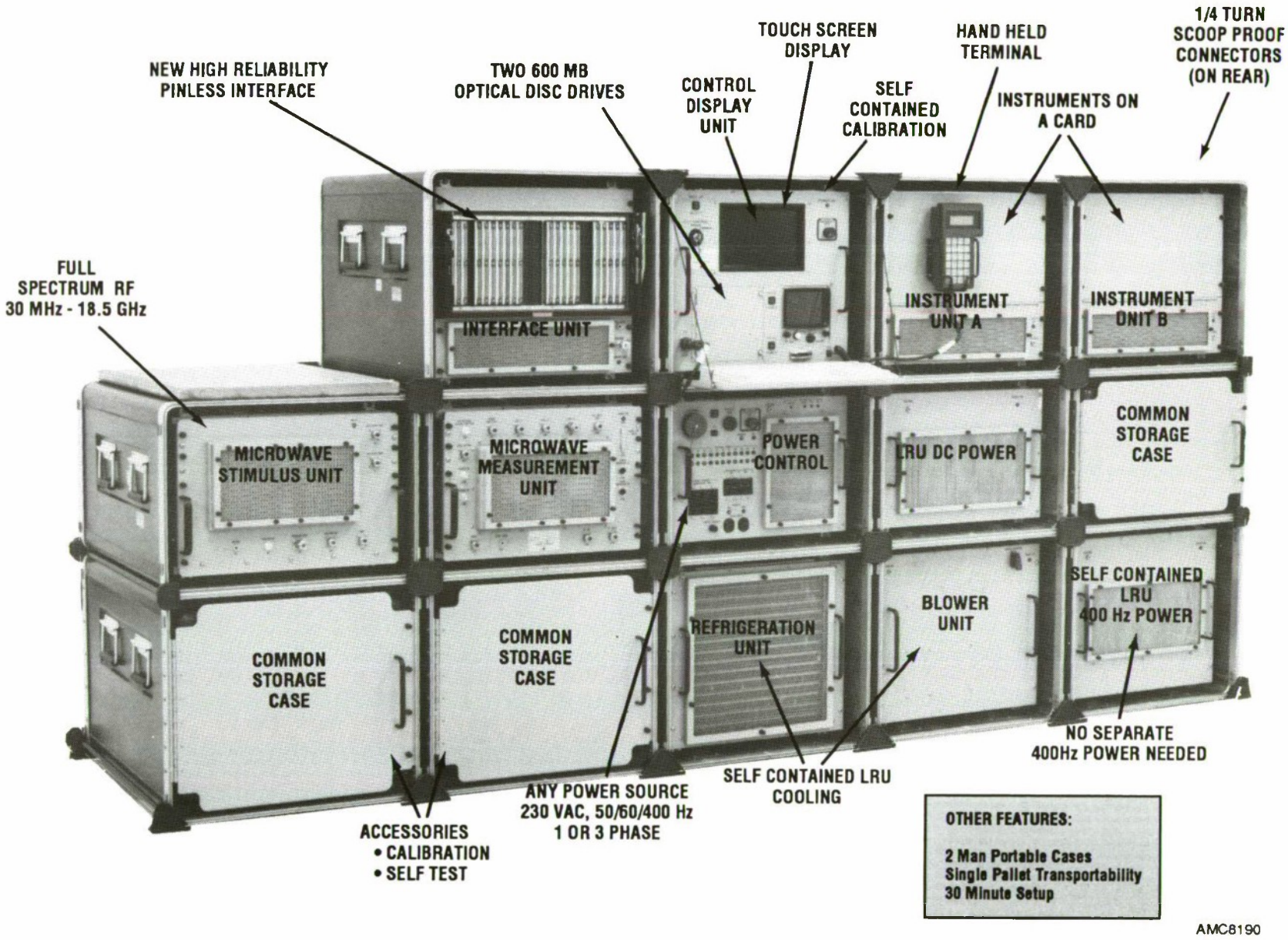


IAIS	Description	Reason for Change	Hardware/Software
SERD 90784 ATE Test Station	Downsized Test Station With Accessory Optics Bench	• Reduced Costs • Higher Reliability • Mobility Requirements	• New Hardware-18 ITA's for 22 LRU's • New Software - Test - Load-OFP's

- Present Design (IAIS) Will Support Twenty-Two (22) LRUs From F-16C/D Aircraft Configurations
  - — Anticipated That USAF Will Add Capability for Two Advanced LRU's (Upgraded Programmable Display Generator and Advanced Programmable Signal Processor)
- IAIS Cost Will Be Approximately One-Half (½) of 4 Station Shop
- LRU's Not Supported on IAIS Could Be Supported at the Current AIS Site
- USAF Changing to Two-Level Maintenance Concept for Selected LRUs

AMC9153

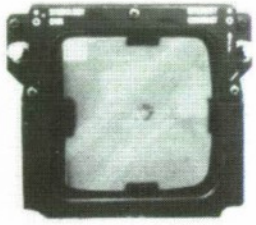
Improved AIS Configuration



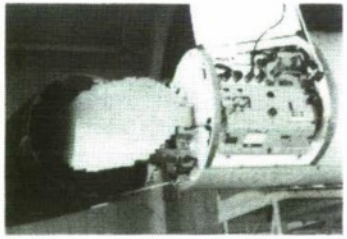
Modern Technology Provides Self-Test/Built-in-Test For F-16A/B

Failures Reported for Storage and Readout

Head-Up Display



Radar/EO Display

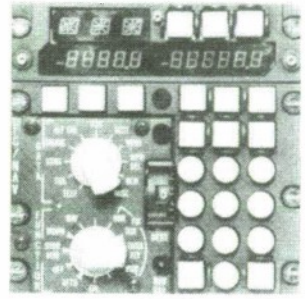


Attack Radar

Other
Fire Control
Subsystems

- In Flight
- On Ground

Fire Control
Computer



Fire Control
Navigation Panel

- **Self-Test Verifies Normal Operation**
- **Faulty Unit Forwarded to Shop for Repair**
- **Flight Line Maintenance Minimized**
- **No Calibration or Adjustment Required after LRU Replacement**

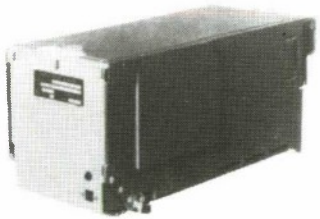
AM5249A

Modern Technology Provides Self-Test/ Built-in-Test for F-16C/D

Failures Reported for Storage and Readout

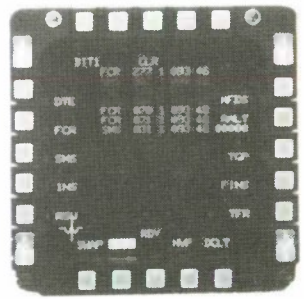
- In Flight
- On Ground

Head-Up Display

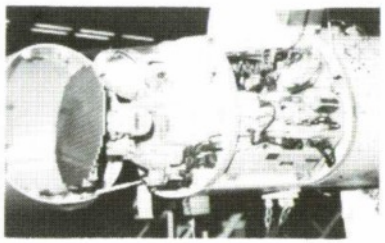


Litton INS LN-93

General Avionics Computer



Multifunction Display/Control



Attack Radar

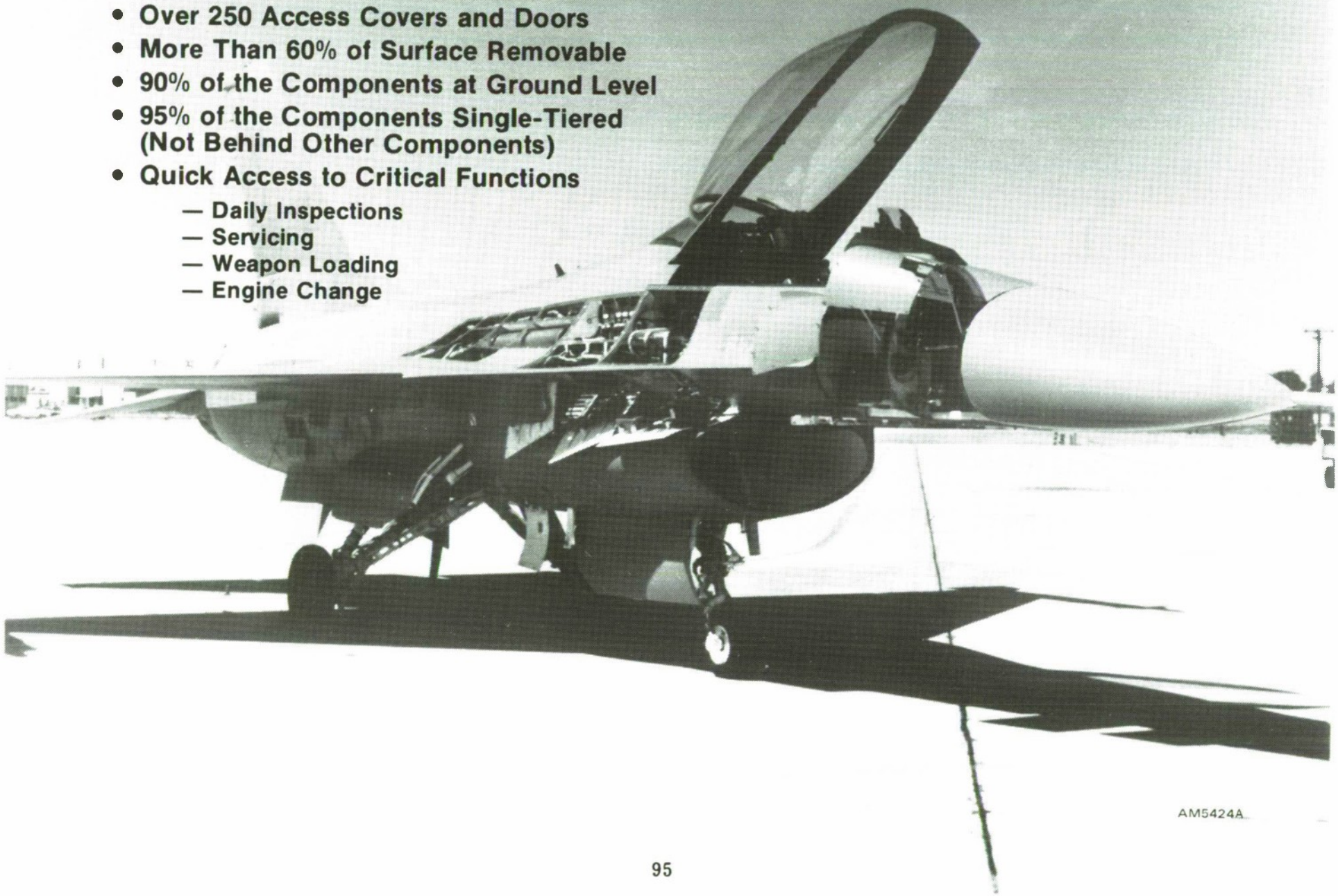
Other Fire Control Subsystems

- Self-Test Verifies Normal Operation
- Faulty Unit Forwarded To Shop for Repair
- Flight Line Maintenance Minimized
- No Calibration or Adjustment Required After LRU Replacement

AMC6121

Best Maintenance Accessibility of Any Fighter

- Over 250 Access Covers and Doors
- More Than 60% of Surface Removable
- 90% of the Components at Ground Level
- 95% of the Components Single-Tiered (Not Behind Other Components)
- Quick Access to Critical Functions
  - — Daily Inspections
  - — Servicing
  - — Weapon Loading
  - — Engine Change



AM5424A

Optional Equipment and Capabilities

AMC15639

*Optional Equipment**

Weapons	• Penguin • GBU-15 • 30mm Gun Pod • AIM-7 • AIM-9P-5	• Standoff Anti-Ship Missile • Long-Range Guided – Glide Bomb • Anti-Armor Gun • Beyond Visual Range Air-to-Air Missiles • All Aspect Short Range IR Missile
Operability Enhancements	• Drag Chute • 600-Gallon Tanks • ATLIS II • ACTES	• Improved Runway Performance • Increased External Fuel Capacity • Autonomous Daylight LGB Deliveries • Self-Contained Air Combat Training Evaluation System
Avionics	• HF Radio • ARN-147(V)	• Over the Horizon Communication System • Combined VOR With ILS

* *There Is Currently No USAF Plan To Complete Development or Incorporate, on the F-16, the Optional Capabilities Presented in This Section.*

AMC15429

Penguin MK-3 Missile

- Medium Range Anti-Ship Missile
- Inertial Mid-Course, Passive IR Terminal Guidance
- Semi-Armor Piercing Warhead
- Designed for Over-Land Launch, Operation in Clutter Background
- Multiple Target Tracking Section

Length = 125 in.
Fin span = 39 in.
Wt = 825 lb

Status

- F-16 Certification Completed for Four Weapons Carriage
- Production Go-Ahead in 1988

AMC12923

GBU-15 Weapon

- E-O Glide Weapon
- 2000 lb MK-84 Warhead
- Lock-On-After-Launch via Data Link
- Standoff $\geq$ LGB III
- Line-of-Sight With Target Not Required
- Accuracy Comparable to LGB III

Data Link Pod
Length = 130 in.
Dia = 20 in.
Wt= 535 lb
Mfr: Hughes

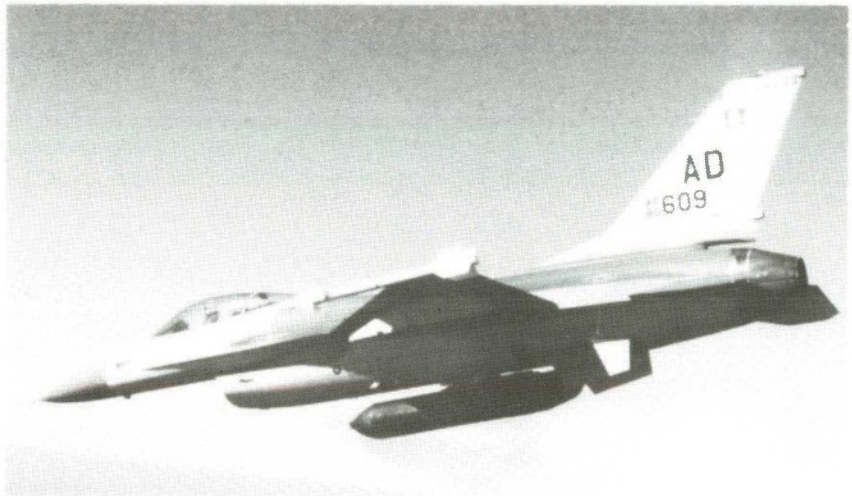
Weapon
Length= 154 in
Fin Span = 59 in.
Wt = 2502 lb
Mfr: Rockwell

Status

- Weapon in Production for USAF & FMS
- Operational on F-16 with One International Air Force

AM4986E

F-16 General Electric 30mm Gun Pod



Four Barrel Gatling Gun

- 350 Rounds GAU-8 Ammo
- 2400 Rounds per Minute
- 6 Milliradian Dispersion

USAF Flight Tested

- GPU-5A Gun Pod Certification Tests on F-16 Completed 15 May 1989
  - — 3 Flights, 5 Live Fire Events
- Modification Program Authorized to Provide Interim Capability on 24 F-16As

AM4987B

F-16 AIM-7 Missile Capability

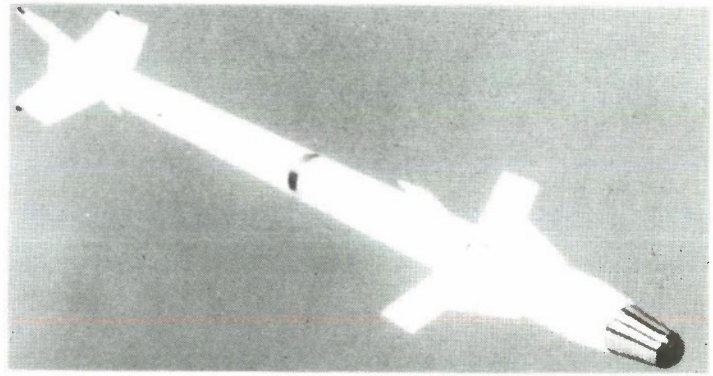
- F-16A/B AIM-7 Capability Developed Under Air Defense Program
  - Flight Test Complete – Early 1989
    - First Separation Launch – October 1988
    - First Guided Launch – February 1989
- Company Funded Development of F-16C/D Capability Complete
  - Start of Flight Test – November 1988
  - Flight Testing Complete – May 1989
    - Two Guided Launches, Two Hits – May 1989
  - First F-16C/D Full-Up Production Delivered in Mid 1992

AMC9154

AIM-9P-5 Air-to-Air Missile

DESCRIPTION

- All Aspect Short Range IR Missile
- New Version of AIM-9P-4
  - Improved Target Tracking
- Maintains Features of Both P-3/P-4
  - Increased IR Sensitivity
  - Multistage, Thermo-Electric Cooler
  - Seeker Slave and Scan Capability
  - Improved Background Discrimination
  - Increased Maneuver Capability



Length: 119.9 in.
Weight: 178.2 lb
Manufacturer: Loral Aerospace

BENEFITS

- Longer Detection Range for All Aspects
- Permits Shorter Range Engagements
- Increased Capability for High "g" Targets
- Utilizes Existing F-16 AIM-9 Interface
- Improved Scan Pattern Incorporated in the Missile Seeker

STATUS

- Airframe, Rocket Motor, and Warhead in Production
- Mission Guidance Control Section In Production
- AIM-9P-5 Capability Available on Every Aircraft that Operates the AIM-9P-3/4

AMC1086A

F-16 Drag Chute System

- Continuous Ribbon Type Chute
- Canister Installation
- Hydro-Mechanical Deployment Mechanism
- Negligible Subsonic Drag Increase

- All F-16s Have Basic Structure for Drag Chute
- Reduces Stopping Distance
  - — 32% Dry Runway (RCR 23)
  - — 55% Wet Runway (RCR 12)
  - — 57% Icy Runway (RCR 4)

Dia = 23 ft
Wt = 148 lb
(Installation & Chute)
Mfr: Irvin Industries

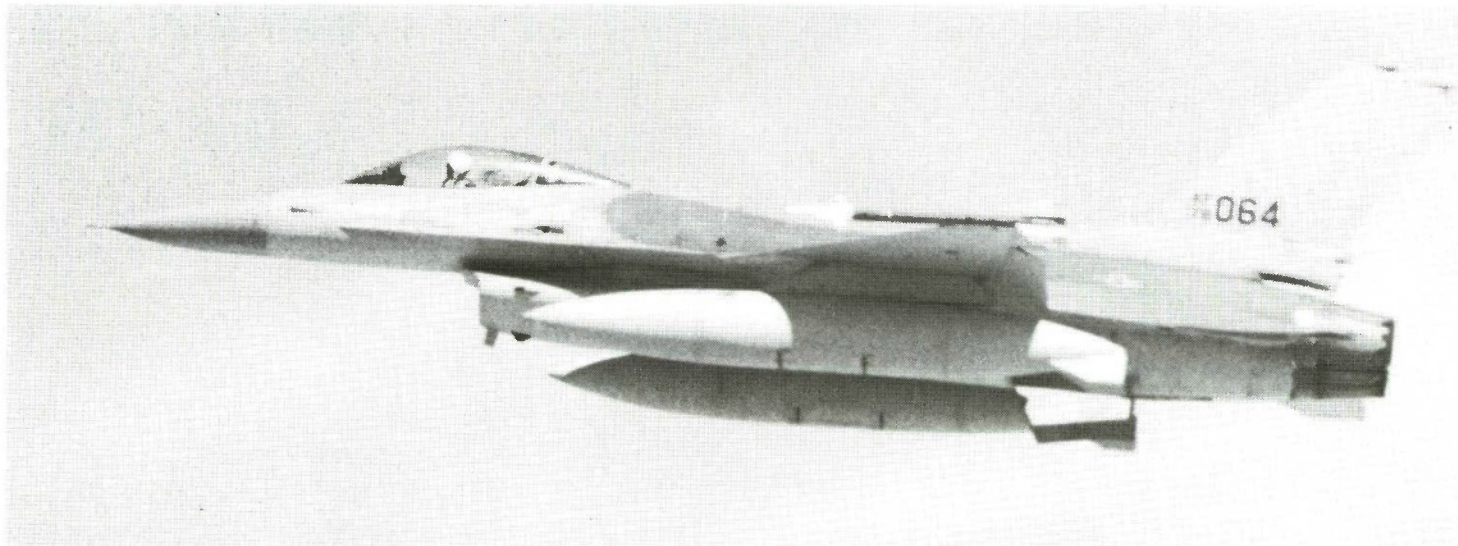
Status

- Operational with Three (F-16 A/B) Air Forces and Two (F-16C/D) Air Forces

AM4389C

600 Gallon Fuel Tank

- Combat Tank — 9-g, 600 KCAS/M = 1.6
- Non-Jettisonable Pylon
- Selectable Capacity — 370/485/600 gal. Tanks
- Compartmented for C.G. Control
- Subsonic Drag Equivalent to 370 gal. Tanks
- Empty Weight 140 Pounds Heavier Than 370 gal. Tanks



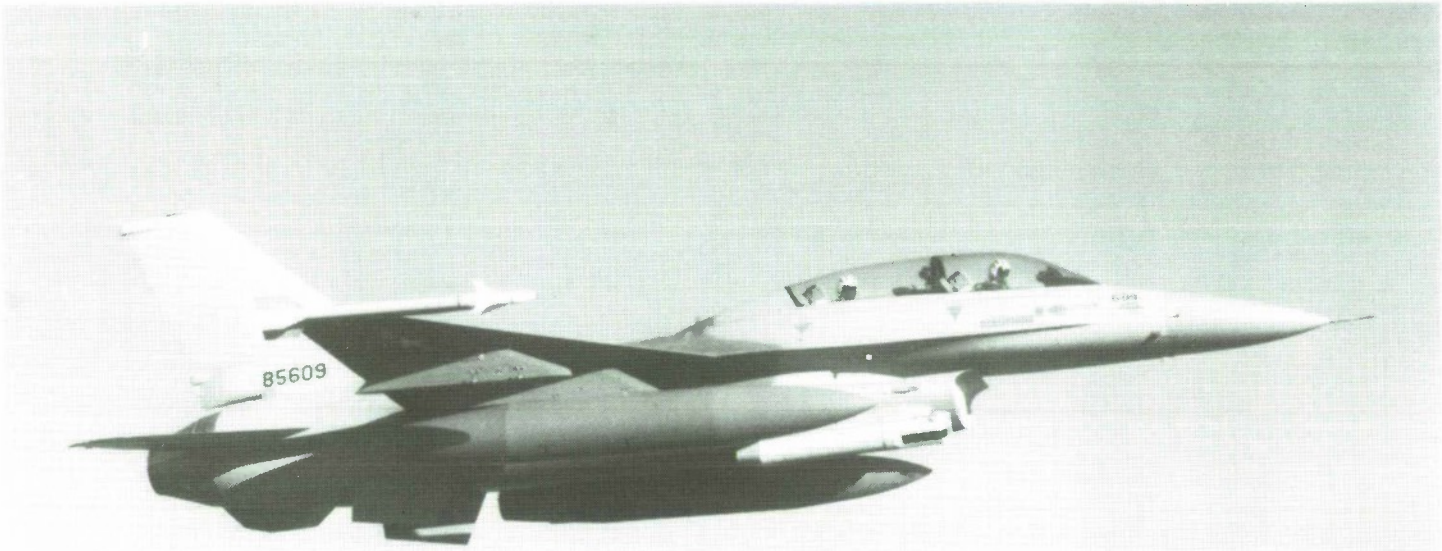
Length = 236.5 in.
Dia = 32.6 in.
Wt Empty = 381 lb
Tank & Pylon: 663 lb

Status • Operational with One International Air Force

AM4992C

ATLIS II E-O Targeting Pod

- Auto TV Tracker With Laser Designator/Ranger
- Visual/Near IR Spectrum
- 150° Look Back
- Autonomous Daylight LGB Deliveries
- Carriage Provisions on Block 15 and Beyond
- Operational Software Available with OCU Upgrade or on New-Buy (A/B) Aircraft



Length = 98.4 in.
Dia = 12.7 in.
Wt = 375 lb

Status

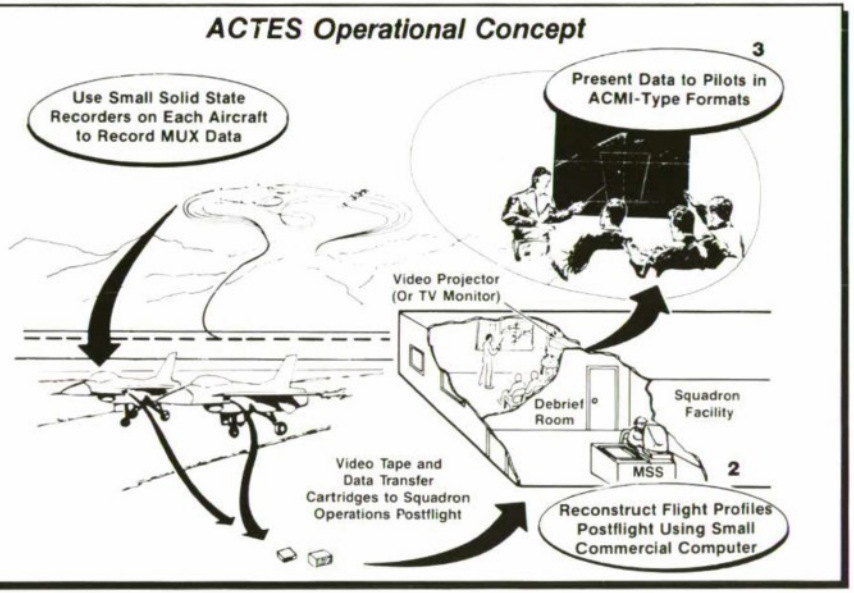
- F-16 Flight Demo in 1978 Demonstrated F-16/ATLIS II Capability for Single-Seat Precision Attack, Including Low Altitude
- F-16 Integration and Flight Test Completed December 1985
- Weapons Certification Testing on F-16A/B Completed February 1986
- F-16/ATLIS II Operational with Two International Air Force

AMC8196B

Air Combat Training Evaluation System (ACTES)

DESCRIPTION

- Squadron-Level Multi-Aircraft Post Mission Debriefing System
- MUX Data Recorder on Each Aircraft
- Ground Processing/Debriefing System Using Off-the-Shelf Computers



BENEFIT

- Combat and Training Mission Debriefing System Totally Self-Contained on Each Aircraft
- No Requirement for Ground-Based Tracking Systems or Instrumented Ranges
- ACMI-Like Interactive Debriefing System
- Available for Daily Use at Each Squadron
- Improves Pilot Tactical Proficiency and Situation Awareness

STATUS

- Proof-of-Concept Flight Testing Complete
  - — Over 400 Missions on USAF F-16A/B and F-16C Aircraft
  - — Testing Included Many Missions with Internal GPS Data . . . Very Accurate Aircraft Positioning Information at All Altitudes
  - — Favorably Evaluated by AFOTEC, AFHRL, and Air National Guard
- Production Retrofit Proposal for F-16A/B Fleet Submitted to USAF in Mid 1990

AM10366A

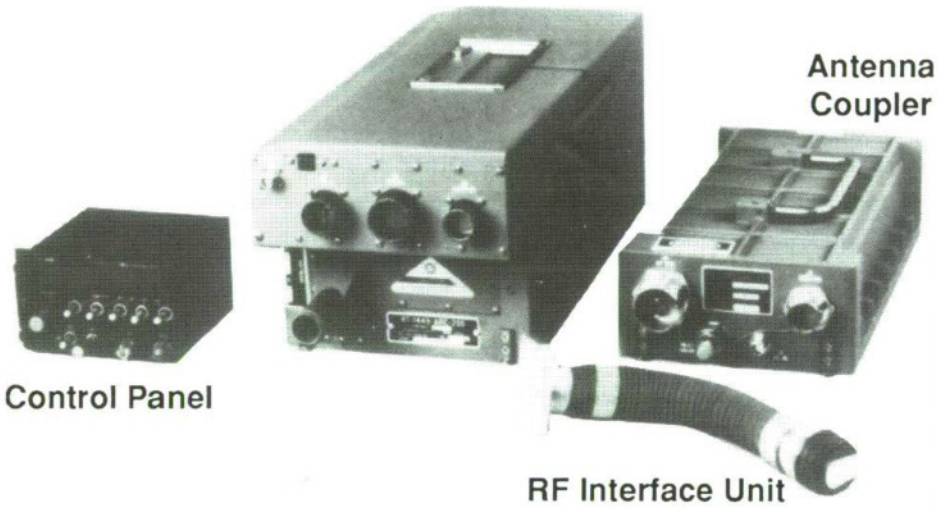
AN/ARC-200 High Frequency Radio

Characteristics

- Long-Range Beyond Line-of-Sight Communications
- Reliable Comm During Low-Level Flight
- Three New LRUs
- Standard USAF HF Radio

Program Summary

- AN/ARC-200 Being Installed in USAF F-16A Air Defense Aircraft



(Antenna in Leading Edge of Vertical Fin)

Enhanced Communications Capability

AMC3381A

ARN-147 (V) VOR/ILS

Characteristics

- Adds VOR to Existing F-16 TACAN and ILS Capabilities
- Form and Fit Replacement for F-16 AN/ARN-108 ILS
- Uses Existing F-16 Localizer/Glideslope Antenna and Marker Beacon Antenna

Program Status

- Completed Qualification Mid-1983
- F-16 Flight Test Completed
- F-16 Production Deliveries Commenced Fall 1983

Weight: 8 lb
Volume: 0.14 cu. ft

Manufacturer: Collins

Increased Instrument Navigation Flexibility

AM5457A

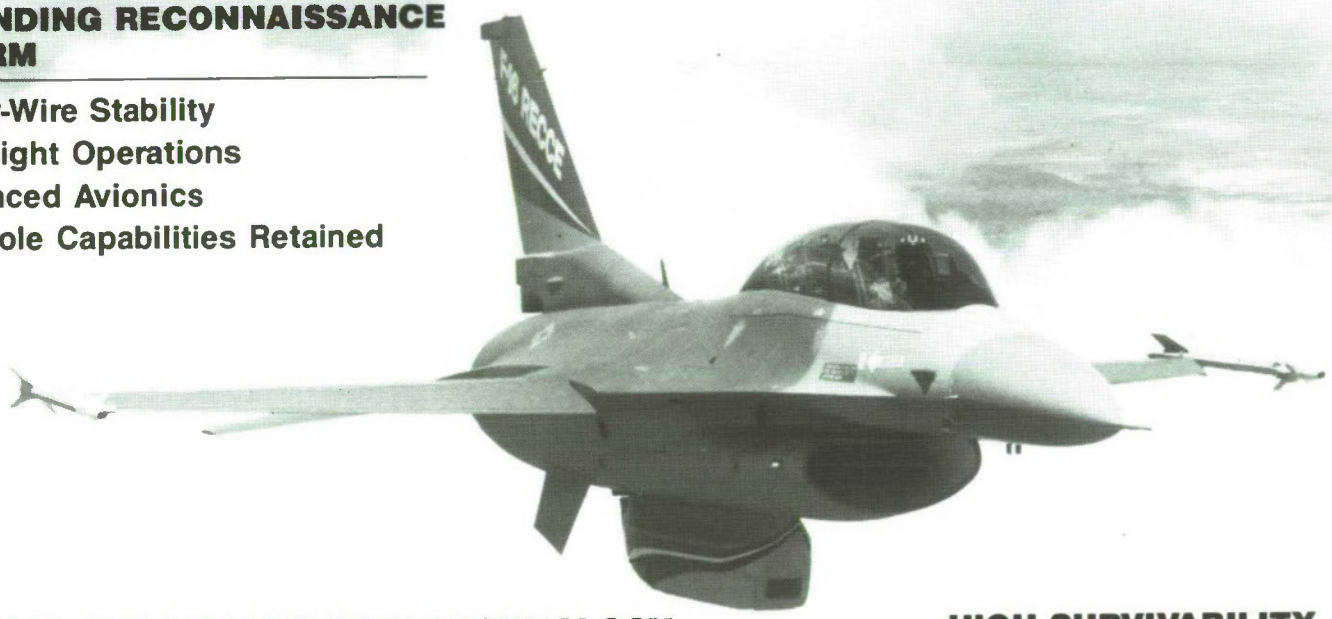
RF-16

AMC15640

The F-16 With Reconnaissance Pod and Electro-Optical Sensors

OUTSTANDING RECONNAISSANCE PLATFORM

- Fly-by-Wire Stability
- Day/Night Operations
- Advanced Avionics
- Multirole Capabilities Retained



ADVANCED RECONNAISSANCE TECHNOLOGY

- High Performance E-O Sensors
  - — Visible Light
  - — Infrared
- Near-Real-Time Capability
  - — Digital Imagery
  - — No Film Processing
- Cockpit Viewing of Imagery

HIGH SURVIVABILITY

- Self-Defense Capability
- Small Size/Observables
- High Maneuverability
- Modern Countermeasures Equipment
- Low Vulnerable Area

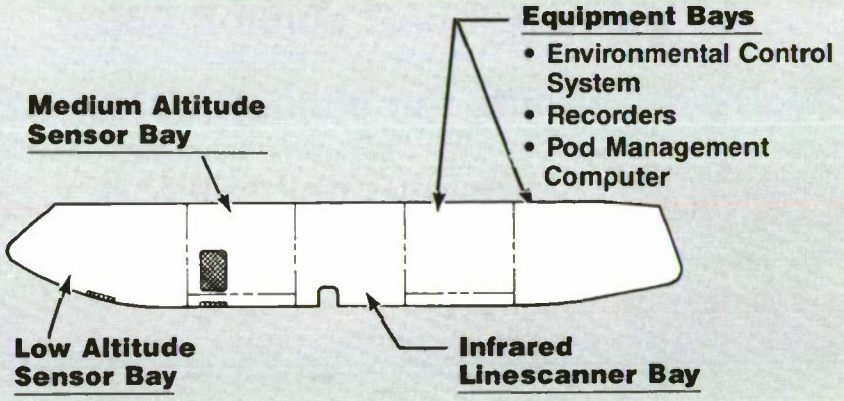
AM19266B

F-16 Reconnaissance Pod

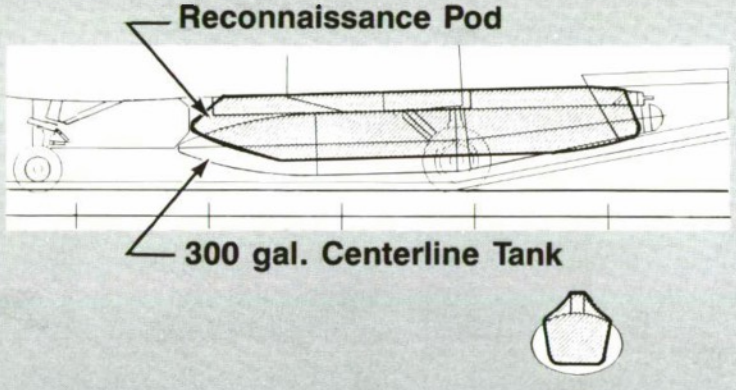
FEATURES

- Designed to the Full F-16 Flight Envelope
- Excellent Sensor Coverage, Repositionable In Flight
- Size/Volume/Drag Comparable to Centerline Fuel Tank
- Optimized for F-16 Aerodynamics, Maintainability, and Fit
- Modular Design for Tailored Sensor Requirements and Growth

MODULAR DESIGN



INSTALLATION COMPARISON



CONFIGURATION & GROWTH FLEXIBILITY

- Wide Range of Electro-Optical and Film Sensors
- Long Range Oblique Photography (LOROP)
- Synthetic Aperture Radar (SAR)
- Forward Looking Infra Red (FLIR)
- Electronic Intelligence (ELINT)

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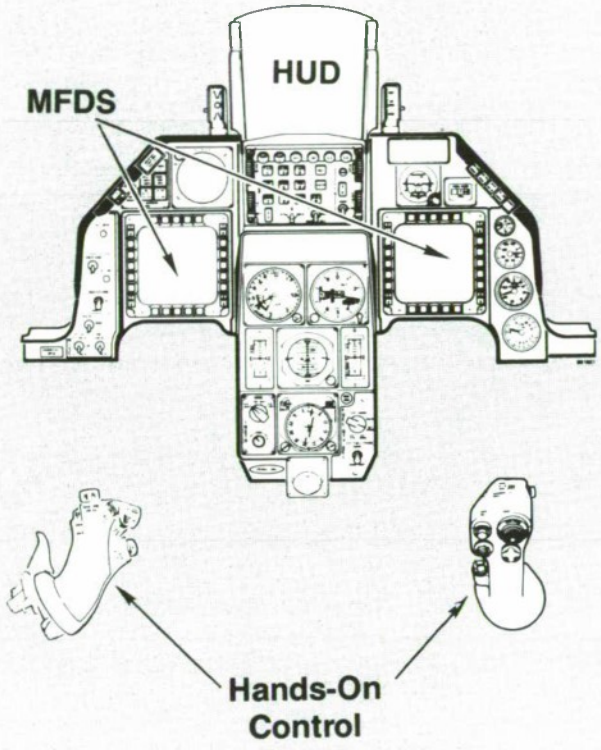
RF-16 Pilot-Vehicle Interface



HANDS-ON, HEAD-UP OPERATION FOR BEST SITUATION AWARENESS . . .

. . . DAY OR NIGHT

Mechanization Combines Automatic Features with Dynamic, Man-in-the-Loop Sensor Control for Optimal Target Acquisition Flexibility

Key Features

- **Auto/Manual Sensor Operations**
  - — Selection, Pointing, On/Off
  - — Quick-Reaction Override
- **Cockpit Imagery Display**
- **Imagery Recall, Review, Data Link**
  - — Recall Imagery by Time, Coordinates, or Event Mark
  - — Select/Deselect Target Files for Data Link to Multiple Ground Stations
- **Quick Change of Mission/Targets**
  - — Data Transfer System, Data Link, Manual Entry

AM17695B

Adding Reconnaissance Enhances the F-16's Flexibility and Fighting Capability

- **Aircraft Modifications Are Minimal**
  - **Pod Interface and Control**
  - **Software Expanded to Include Reconnaissance**
- **Air-to-Air and Air-to-Ground Capabilities Remain Intact**

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